JPRS 78955

11 September 1981

China Report

ECONOMIC AFFAIRS

No. 171

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NATIONAL POLICY AND ISSUES

'JINGJI YANJIU' ON CHINA'S SOCIALIST SYSTEM

HK290800 Beijing JINGJI YANJIU [ECONOMIC RESEARCH] in Chinese No 7, 20 Jul 81 pp 3-10

[Article by Xu Dixin [6079 3321 2450]: "On China's Socialist System"]

[Text] In studying the "resolution on certain questions in the history of our party since the founding of the People's Republic of China," I deeply felt that due and clear deliberation should be made on this yatter, that is deciding, "whether or not the socialist system has been established in China." I would like to expound on this subject from the economic angle.

Lenin once briefly pointed out: A socialist system has two fundamental characteristics: one is public ownership of the means of production and the other is that the principle of "to each according to his work" is practiced in regard to consumer goods. Are these two fundamental characteristics part of China's social economic system?

I. On Socialist Public Ownership of the Means of Production

Socialist public ownership of the means of production is the economic basis of a socialist society. In the early days following liberation, with the confiscation of bureaucrat capital of the big four families of the Kuomintang, nationwide socialist state-owned economy was established which was represented by the state power of the people's democratic dictatorship under the leadership of the proletariat. The socialist state-owned economy encompassed the major proportion of the modern industrial, mining and transport enterprises and became the mechanism of the whole national economy. In the winter of 1952, through various ways and means the state integrated those enterprises built with foreign investments which had been in operation for a long time into the socialist state-owned economy. By the first half of 1956, with the realization of the joint state-private ownership throughout the trades and professions, the capitalist industry and commerce run by the former national capital were transformed into state-run enterprises under the system of ownership by the whole people. It can be said that in the 1950's, or more precisely in 1956, the state-owned economy under the system of ownership by the whole people was established in the main. Of course, judging from the present state of affairs, the state-run enterprises formed by confiscating bureaucrat capital, taking over foreign capital investments in China and transforming the national capital comprised only a small part of state-run enterprises. Most of the state-run enterprises were set up by the Chinese people over the past 2 decades or so. These enterprises are owned by the whole people and the economy is socialist in nature.

At present, China's enterprises under the system of ownership by the whole people have taken the form of state-run enterprises. That is to say, representing the entire people. The state under the people's democratic dictatorship runs and manages the enterprises under the system of ownership by the whole people. There is a difference between the emergence of socialist ownership of the means of production and private ownership of the means of production. History tells us that private ownership of the means of production occurred and grew spontaneously but socialist ownership of the means of production (including ownership by the whole people and the collective) was established through the socialist revolution launched by the proletariat and through the expropriation of enterprises. Since socialist ownership of the means of production (in particular, ownership by the whole people) was established by the state power under the people's democratic dictatorship, then, it is inevitable both in theory and practice for the state which represents the people to manage and run the newly established enterprises under the system of ownership by the whole people. It is only natural that ownership by the whole people is not necessarily in keeping with ownership by the state entirely. In the future, after the state perishes, the problem of the state representing, managing and running enterprises owned by the whole people will not exist. In China today, the state-run enterprises in some localities or even those under the jurisdiction of some ministries are sticking to the departmental interests and ignoring the interests of the whole. This not only infringes upon the nature of the state-run enterprises but also seriously infringes upon the nature of ownership by the whole people. To put it another way, they have lost to a certain degree the nature of socialist ownership by the whole people. This is a problem urgently demanding our prompt study and solution.

Practice over the past 30 years has proved that it is undoubtedly logical for the state power under the people's democratic dictatorship to manage and run the enterprises under the system of ownership by the whole people. Of course, there are contradictions between the state and enterprises. In managing enterprises, if the state policies stem from over-centralization, the decisionmaking power of enterprises will be weakened or even abolished, thus causing the enterprises to take a completely passive position, hampering their flexibility and dampening their enthusiasm. In maintaining its leadership over enterprises, if the state takes in consideration the roles of objective natural and economic laws and acts upon administrative measures alone in doing things, we will not achieve the deserved economic results in the socialist production and socialist construction, resulting in great waste to the enterprises and even to whole departments. These defects have dawned on everybody. The party and the state are adopting measures to improve the system of the state-run enterprises and rectify the management of state-run enterprises.

Regarding China's public ownership of the means of production, apart from ownership by the whole people, there is the ownership of the means of production by the collective which are formed by the working people. The major component of collective ownership was the rural collective agriculture. Over the past 2 decades or so, in our socialist collective agriculture, we adopted a system of three-level ownership by the commune, the production brigade and the production team, with the production team as the basic accounting unit. The overexpanded power of the commune and the production brigade hampered the decisionmaking power of the production team and dampened the enthusiasm of the commune members for production. In the past 2 years, in many places the production teams implemented the system of "fixing output quotas for households." For this reason, some people hold that there is a retrogression in China's socialist collective agriculture. The facts have negated this claim. "Taking full responsibility for fixed farm output quotas" is a type of production responsibility system and is not private ownership of the means of production. Under the leadership of the production teams, "the households responsible for the fixed farm output quotas" sign contracts on their output quotas on rewards for exceeding the contracts and punishments for not fulfilling them. "The households responsible for fixed farm output quotas" only have the right to use the land; they do not own the land. This proves that the production responsibility system characterized by "taking full responsibility for fixed farm output quotas" is not a political negation of the agricultural collective ownership but on the contrary, it takes the collectively-owned land as a prerequisite. This also shows that there exists a fundamental difference between the production responsibility system characterized by "taking full responsibility for fixed farm output quotas" and "land being parcelled out to peasant households." "Land being parcelled out to peasant households" means quite clearly individual farming and sabotages agricultural collective ownership. This must be resolutely opposed: The production responsibility system characterized by "taking full responsibility for fixed farm output quotas" is a kind of labor organizational form conducive to developing production. This labor organizational form is a political negation of the past practices of "doing things in a massive and unplanned way" and "being on duty but doing on work," and a political negation of the "approximate workpoints" which was in violation of the principle of "to each according to his work." The practice in the past 2 years has shown that the present production responsibility system is characterized by "taking full responsibility for fixed farm output quotas" suits the current level of development of agricultural productive forces and the level of consciousness of the masses of commune members. Obviously, this form of "taking full responsibility for fixed farm output quotas" is not a permanent system. At present, in some places "the households responsible for fixed farm output quotas" are being integrated to develop agriculture and sideline production due to lack of manpower. In order to continue to arouse the peasants' enthusiasm for production and enable the peasant to become rich, we should not push this integration too quickly. With the development of agricultural production and rural diversified economy, the spontaneous integration of "the households responsible for fixed farm output quotas" seems to be a trend of development. However, this trend is unlikely to be supervised from the top to bottom and a mass movement "rolling on at full force."

In the past 2 decades or so, we treated collective ownership differently. We regarded ownership by the whole people of the means of production as being far superior to collective ownership of the means of production in respect to the degree of public ownership. This was because the degree of collective ownership was limited to a smaller scope, to a specific collective, while that of the ownership by the whole people was owned by the working people of the whole country. Proceeding from this understanding, they emerged the problem of the so-called "transition." Under the prerequisite of maintaining the three-level ownership by the commune, the production brigade and the production team, with the production team as the basic accounting unit, the production team should undergo a transition to the production brigade and the production brigade to the commune, and the commune should undergo a transition to ownership by the whole people from collective ownership. By that time, there will be sole ownership by the whole people throughout the country. From a long-term point of view, before entering communism, it is an inevitability to realize sole ownership by the whole people. But, today if we promote rapid changes in the matter of ownership and make preparations for realizing sole ownership by the whole people irrespective of the level of development of the rural productive forces, the "paupers' transition" which amounts to sabotaging the rural productive forces will inevitably occur. This "paupers' transition" was in essence an important form of the "stirring up of winds of communism." When the conditions of the level of development of the rural productive forces and the level of consciousness of the masses of commune members are not ripe enough to undergo a "transition," we indulge in "transition" by resorting to coercion and commandism. How can this practice not arouse the resentment of the masses of commune members, resulting in their killing hens, selling cows and felling trees?

Practice proves that taking full responsibility for their own profits and losses by the enterprises under the system of collective ownership is definitely not the so-called revisionism. Regarding the development of the socialist national economy, it is far better than the system in which the state-run enterprises eat from the same big rice pot with iron bowls. "Taking full responsibility for one's own profits and losses" is a kind of responsibility system in production (management) whereas eating from the same big rice pot is the opposite a contradiction with responsibility system in production. Therefore, if all enterprises under the system of collective ownership are advanced into the ranks of state-run enterprises which is "eating from the same big rice pot," this will create an incalculable burden to the socialist national economy. Of course, those who stick to indulging in "paupers' transition" and the early realization of sole ownership by the whole people are small in number. But, the bitter experiences have caused people to maintain vigilance on this issue. I hold that ownership by the whole people and collective ownership will coexist for a considerable period. This suits the level of development of productive forces and that of socialist consciousness of the masses of people at the present stage of our country. Letting the two systems of ownership by the whole people and collective ownership exist side by side for a long period of time will benefit the development of our social productive forces and improve the material and cultural life of the residents of both urban and rural areas, and also end the "paupers' transition" which harms the rural productive forces.

As for ownership of the means of production, for a number of years ahead, we should not only vigorously develop collective ownership characterized in taking full responsibility for one's own profits and losses, but also appropriately develop individual economy, that is, we should develop service trades, repair and renovation service, individual commerce and the production of labor-intensive and traditional handicrafts. The more modernization develops, the comparatively less and less it needs manpower (unskilled labor in particular). Providing young people awaiting jobs has become a heavy burden to the state, let alone the rapid growth of our population. It is important to relax the policies concerning individual economy and open up avenues of employment to the young people awaiting jobs, to provide workers for those trades which need a sizable number of workers and to facilitate residents in urban and rural areas. Appropriate development of the individual economy will become a necessary complement to the socialist economy instead of doing harm to the collective economy which holds the dominant position in the national economy.

In order to realize the socialist modernization drive, we must uphold the principle of self-reliance and carry out reform and rectification among the existing 350,000 enterprises so as to improve their technical level, ensure product quality, raise the management level, do a good job in business accounting and obtain the maximum results at minimum costs. Along with this, it is very necessary to use foreign capital and form joint ventures with Chinese and foreign investment. This is a way for us to import new techniques from abroad which deserves our special attention. Besides, we have set up economic zones in some coastal areas such as Shenzhen, Zhuhai and Shatou in Guangdong Province and Xiamen in Fujian Province. Some people worry: This is the restoration of foreign capital in China and the revival of old China's "concessions." In my opinion, these worries are unnecessary. Facts will prove that the sovereignty of the present economic special zones is in the hands of our country and not in the hands of the foreigners like it was in old China. Facts will show that these "joint enterprises with Chinese and foreign investment" are state capitalism of a special form; the "privately-operated enterprises" set up in the special zones with the approval of our government are capitalist enterprises under the management and restriction of our government. They are state capitalist in nature. It is only natural that those putting up the foreign investment in joint ventures want to exploit surplus value. They are not philanthropists. If there are no good prospects for profits, they will make investments. However, in order to absorb foreign capital and introduce advanced technology from abroad, a definite amount of exploitation is tolerable. It is in nature a policy of redemption. The joint ventures with Chinese and foreign investment and privately-operated enterprises with foreign investment occupy only a small proportion in the whole national economy and the redemption they earn also comprise a small proportion in the national income. Therefore, the establishment of economic special zones and the importation of foreign capital will never shake our socialist economic system.

Since the operation of some individual economy is allowed in cities and towns and foreign investment is permitted in our country to form joint ventures with Chinese side and operate private enterprises, it is China's socialist public ownership (ownership by the whole people and collective ownership) that holds a leading position and has the absolute advantage in our national economy instead of them. The socialist ownership of the means of production has negated the exploitation of man by man (as part of the redemption, we should deal with it separately) and has become the prerequisite for the interrelations of mutual aid and cooperation established in the process of production, and has become material conditions for developing the national economy in a proportionate and planned way. Of all these, which points are proving that China today is not a socialist country? If we take the individual economy and the joint ventures with Chinese and foreign investment or the privately-operated enterprises a basis for negating the fact that China's socialist public ownership of the means of production holds an absolute predominance in the whole national economy, if we take the enlargement of decisionmaking power of state-run enterprises and the adoption of the production responsibility system characterized by "taking full responsibility for fixed farm output quotas" in the rural areas as a basis for deciding that China is moving back from socialism to capitalism, or even doubt that whether China is a socialist country, this will be a denial of objective facts and a distortion of our socialist system.

II. On the Principle of To Each According To His Work

Another fundamental characteristic of socialist society is the principle of to each according to his work. Under the socialist system, the implementation of the principle of to each according to his work in the distribution of the means of consumption is based on socialist public ownership of the means of production. In the capitalist society, the laborers have nothing; they have to sell their labor power as a commodity to the capitalist. The wages earned are set by the capitalists for their labor power.

The surplus value squeezed by the capitlaists from the process of production by the laborers is distributed among the industrial capitalists, commercial capitalists and banking capitalists in the form of profits and interests according to the amount of capital. Needless to say, the working people receive no portion of these whatsoever. Only on the condition of the abolition of the capitalist system and the realization of public ownership of the means of production, can people depend on their labor but not on property to obtain the means of consumption. Under the principle of to each according to his work, all people can equally use a standardized yardstick--labor--to measure the quantity and quality of labor one provides to society. That is to say, the principle of to each according to his work is an inevitability in the field of distribution of socialist ownership of the means of production.

Many of our comrades have affirmed the socialist principle of to each according to his work. At a stage before 1950, China's trade union and its affiliated organizations and the industrial departments concerned once adopted reforms of the wage system (special attention was paid to piece rate wages), thus realizing the principle of to each according to his work. It was a pity that not long after the implementation of this socialist principle of distribution, it was pounded by the "leftist" ideology. The "leftist" ideology held that the principle of to each according to his work took unequal bourgeois rights as principles and therefore it held that the principle of to each according to his work would inevitably create differences among the people--some would be rich while others were poor. The Lin Biao and Jiang Qing counterrevolutionary cliques more wantonly vilified the principle of to each according to his work and glorified egalitarianism. They looked upon the principle of to each according to his work as capitalism while egalitarianism as socialism. Due to the longstanding propagation, even after the smashing of the "gang of four," egalitarianism was still playing a disruptive role comprehensively and profoundly in various fields.

Egalitarianism is not the socialist principle of distribution and not the inevitability of socialist ownership of the means of production. In order to develop China's socialist national economy and arouse the enthusiasm of the masses of working people for socialist production, we must repudiate the harmfulness of egalitarianism in a comprehensive and long-term way. At the same time, we must repeatedly explain that only when the principle of to each according to his work is practiced, can the superiority of socialism be displayed.

III. Views on Some Viewpoints

As mentioned above, after the founding of state power under the people's democratic dictatorship, the confiscation of the land of the feudal landlords and organizing the peasants to whom land was distributed, and the realization of socialist transformation of agriculture, handicrafts industry and capitalist industry and commerce, our country entered the socialist society. But, today as we have been a socialist society for more than 2 decades, there are still some comrades who have raised an objection to the nature of China's society and its entering of the socialist society.

1) An argument holds that only when the highly socialized production and the direct distribution of products among the people are realized, that is to say, only on the condition that commodities and money are abolished, can such a society be called a socialist society. However, in our country, the state-owned economy under the system of ownership by the whole people or the collectively owned economy of the working people are still producing commodities and need commodities and money. According to this argument, our country cannot be regarded as a socialist society. Can this argument hold water?

Concerning social production and social circulation after the abolition of the capitalist system, Marx once predicted that commodities and money would exist no longer. In Volume 2 of "Das Kapital," Marx wrote: "In the production under the system of public ownership by society, money-capital will no longer exist. The society distributes manpower and the means of production among the different production departments. The laborers may get paper certificates by which they can draw a portion equal to their labor time from the social reserves of consumer goods. These certificates are not money. They are not circulated." Commodities and money all belong to historical economic category. They naturally cannot escape from the historical law of coming into being, developing and passing away. For this reason, the elimination of commodities and money predicted by Marx will come true some day. But, we must never deny the concrete conditions of social production and treat this prediction of Marx' in a dogmatist manner.

After the October revolution (in 1919) Lenin made a statement on the fate of money. He said: "Can money be eliminated at once? It cannot. Long before the October revolution, the socialists had said that money could not be eliminated at once, and our personal experiences have proved this." He later said: "For the time being money will remain, and remain for a fairly long time in transition period from the old capitalist system to the new socialist system." ("Collected Works of Lenin," Vol 29, p 321) Stalin made a firmer assessment on this matter. He said: "So that's how it is. On the condition of our (meaning the Soviet Union,--the following quotation refers to the same) socialism, the economic development was not carried out in a transformative way but in a gradually changing way. Old things were not simply eliminated in a neat and tidy way but they changed their nature to suit new conditions and they kept their basic forms. Instead of eliminating old things, new things infiltrated into old things, changed their nature and functions but did not destroy their forms, instead, used their forms to develop themselves. So is the case of not only commodities but also money in economic circulation and even so is the case of banks." (Stalin: "Problems of the Soviet Economy," p 42) According to these quotations from Stalin, in the socialist system, commodities and money are things which have changed their former nature and functions and serve the socialist economy. We must implement the principle of to each according to his work, because the double-track system of socialist ownership of the means of production will exist for a long time and the production of social material wealth cannot in a period of considerable length reach the state of to each according to his needs. With the immense variety of consumer goods needed by the members of society, to exercise direct distribution of products will bring innumerable difficulties. Therefore, in the socialist society, commodities and money will exist for a fairly long period of time instead of a short one. If attempts are made to abolish commodities and money in an over-simplified way, this will bring incalculable disorder and disaster to the socialist national economy. Are these disorder and disaster merely predictions? Haven't they been verified by actual practice in certain places? In short, the elimination of commodities and money are not the fundamental characteristics of the socialist society. The utilization of the forms of commodities and money is not a political negation of socialist public ownership of the means of production. In our country, now that the socialist public ownership of the means of production has been established and commodities and money have been used to serve the socialist economy, then, can the argument that takes the existence of commodities and money as the basis for doubting our socialist system hold water?

2) Another argument holds that only in the countries where capitalism is highly developed can the socialist revolution be carried out and the socialist system be established. But before liberation, China was in a state of dilapidated semicolonial and semifeudal society with extremely low level of development of productive forces, therefore, it was necessary to fully develop capitalism before the introduction of socialism. This viewpoint is nothing new. The advocates of the second international (even China's liquidationists such as the Troskiyist Chen Duxiu) said this. To oppose the socialist revolution of the Russian working people, the advocates of the second international raised the so-called "the Russian productive forces have not developed to such a degree as to realize socialism." In appearance, they seemed to uphold the law that the relations of production must suit the level of development of the productive forces, but in essence, they were serving the rule of the bourgeoisie and sabotaging the socialist revolution of the Russian proletariat and working people. In his "Problems of the French and German Peasants," Engels clearly said: "Before realizing this change, we need not wait for the time when the outcome of development of capitalist has been manifested in extreme form everywhere and when the last one of small handicraftmen and small farmers has become the victims of capitalist mass production." ("Selected Works of Marx and Engels," Vol 4, p 312) Lenin developed the ideas of Marx and Engels, pointing out that the proletariat could use the established worker-peasant alliance to seize political power and then rely on the proletarian political power to develop the economy and culture, and thus realize socialism. He said: "If a definite level of culture is required for the building of socialism (although nobody can say just what that definite "level of culture" is, for it differs in every West European country), why not begin achieving the prerequisites for that definite level of culture in a revolutionary way, and then, with workers' and peasants' government and the Soviet system, proceed to overtake the other nations?" ("Selected Works of Lenin," Vol 4, p 691)

Under the leadership of the CCP, through hard struggle for several decades, the Chinese people overthrew at last the three big mountains on their backs and founded the state power of the people's democratic dictatorship led by the working class. Under these circumstances, why should we let the capitalist system which squeezes the masses of working people develop in China? Is it not turning back the wheel of history? Can the masses of the Chinese working people agree with this practice of turning back the wheel of history? Second, with the victory of the new democratic revolution, the comprador class was toppled but the national bourgeoisie was preserved. Can the national capital with its every weakness shoulder the historical task to develop China's national economy? More than 100 years have elapsed since the opium war. During this long period of time, what did the national bourgeoisie develop in the national economy? They ran only cotton yarn mills, flour mills and other sectors of light industry; regarding heavy industry, they could only do repair trade, and the manufacture of complete sets of equipment was out of the question. Their economic strength was pitifully weak. For instance, when joint state-private ownership was realized among all trades and professions in 1956, the result of checking up of assets showed that the national capital throughout the country was only 2.1 billion yuan. This sum of capital was equal to that invested in "the Anshan Iron and Steel Company." The whole national capital could only afford an "Anshan Steel and Iron Company." With what strength could they develop other trades and professions? Since we have established the state power under the people's democratic dictatorship and the state-owned economy under the system of ownership by the whole people on the basis of confiscating the bureaucrat capital of the Kuomintang, then will letting capitalism develop on a large scale be justified in theory or will it work in practice?

3) Some people argue that the new democratic economy existed in China for too short a time. Beginning in 1949, it was only for 7 years. In fact, the new democratic economy consisting of the publicly-owned economy, the cooperative economy, the individual economy and the privately-owned economy was long practiced in the Soviet areas during the agrarian revolution and in the anti-Japanese base areas during the anti-Japanese war, though the scope of the publicly-owned economy was not big at that time. Therefore, the argument that the new democratic economy existed for only 7 years in China does not tally with the facts. According to the "General Line for Transition Period" issued in 1953, the set timetable was 15 years for transforming agriculture, handicraft industry and commerce. Calculated on the basis of 15 years, the time needed to complete the three big transformations and of socialism would have been postponed until 1968. That is to say, beginning with the founding of the PRC to the completion of the three big transformations, it was to have taken 20 years according to the plan. But, in reality, the accomplishment of the three big transformations only took about 4 years. If the pace was not too hasty, if the enterprises with national capital had been allowed to continue to provide the state-run commerce with an ever-increasing variety of commodities with distinctive features for a considerable period of time in the form of state capitalist and if the state placed orders with private enterprises for processing materials or supplying manufactured goods, all this would not have harmed the leadership of the state-owned economy and the socialist construction. Judging from a certain angle, this argument is not wrong. But making use of this formulation to advocate the slogans of "long live new democracy!" and even "long live capitalism!" will be a serious matter. This is because if things are allowed to develop in accordance with this formulation, then the secondary will supersede

the primary and capitalism or state capitalism will become the main body of the national economy, thus the socialist road the Chinese people are taking will be changed. How could this be acceptable to the masses of working people? We admit that the socialist transformation of capitalist industry and commerce was a bit too hasty and was carried out rather roughly. We did not make good use of the personnel of the privately-operated enterprises who were technically skilled and had managerial experience, and we did engage in excessively cutting down, merging, reorganizing and integrating of enterprises. As a result, only a few brand-name products which had their distinctive features and were welcome by the consumers were preserved and a few service and repair networks and centers were retained, thus bringing inconvenience to consumers. However, the party's policies concerning the uniting, educating and remolding of the national bourgeoisie and the socialist transformation of capitalist industry and commerce through the multiforms of state capitalism must be affirmed.

IV. Strive Hard for the Improvement and Consolidation of China's Socialist System

Ours is a socialist country. Viewed from the fundamental characteristics of the socialist economic system, it qualifies as a socialist country. From the angle of the level of development of the socialist economy, ours is in a developing state or rather in an elementary stage. Why is it so? First, before the founding of the PRC, China was a semifeudal and semicolonial country. China's present socialist society emerged from the womb of semifeudal and semicolonial society in which capitalism was undeveloped. After the founding of the PRC, although great achievements were made in China's national economy, a relatively independent and integrated industrial system and national economic system were formed, no fundamental changes have taken place in the level of development of social economy, science and culture, and the influences of the small producers' ways of business, force of habit and feudal traditions are still playing an obstructive role in the development of the socialist economy. Second, after 1949, China achieved initial results both in reviving the national economy and in the first 5-year plan. (Achievements that could not be belittled were also made during 1962-1966 readjustment.) But since 1957, the "leftist" guiding ideology has repeatedly played an obstructive and destructive role in various fields, particularly in the socialist production and socialist construction. The 3 years of the great leap forward and the 10 catastrophic years greatly sabotaged the material resources and finances of the state and people. Besides, the waste caused by the mismanagement of enterprises was fairly amazing. This sabotage and waste caused our national economy to develop rather sporadically, and the superiority of our socialist system could hardly be brought into full play. The "leftist" guiding ideology and backward business management were not the inevitability of the socialist economic system itself but the opposite of the socialist economic system. To subjectively attribute the sabotage and waste caused by the "leftist" guiding ideology and backward ways of business management to the socialist economic system itself or even use this sabotage and waste to negate the existence of our socialist economy is obviously wrong and runs counter to objective facts.

To help our socialist economic system enter the developed stage from the elementary one, the following work must be done:

1) China's socialist system is in an elementary stage and is undergoing the process from imperfect to perfect, and this process cannot be accomplished within 3 or 5 years. This requires us to the socialist system, to try our best to overcome both the "leftist" and rightist guiding ideologies which sabotage the socialist economy, and reform the institutions and ways and means that hamper the development of the productive forces (such as the practices of eating from the same big rice pot and holding iron rice bowls) which are detrimental to improving the standard of living of the people (as the neglect of the second category production). Only when we unremittingly persist in doing things this way can the great superiority of socialism be manifested with each passing day.

2) It is necessary to develop in every possible way China's social productive forces and build a strong socialist material base. This is the only out to solve China's domestic principal contradiction after the basic completion of the socialist transformation (the contradiction between the people's evergrowing demands and the backward social production). Developing China's social productive forces must be carried out in the light of reality and in conformity with economic and natural laws, within the limits of our resources, step by step, after due deliberation and with emphasis on practical results, so that every capital construction unit can form new productive forces on schedule with the required quality and quantity. To develop productive forces, we must not merely "extensively" enlarge the scale of production but also "intensively" enlarge reproduction. Marx said: "The enlargement of places for production means extensive enlargement while the improvement of the efficiency of the means of production means intensive enlargement." ("Das Kapital," Vol 2, p 192) According to our practice, the so-called "intension" means improving the production efficiency of existing enterprises and the tapping, renovating and transforming the existing enterprises. Only when we integrate "extension" with "intension," can we develop our social productive forces while economizing in this effort.

3) The aim of socialist production is to satisfy the ever-growing material and cultural demands of society and the people. So long as satisfying of the ever-growing material and cultural demands of society and the people is carried out, socialist ownership of the means of production can manifest its nature and the socialist system can demonstrate its superiority. For a number of years in the past, under the dominance of "leftist" ideology, efforts to improve the people's livelihood and satisfy the people's demands were neglected. Also during this time, capital construction prevailed over production, while the first category of capital construction and production overwhelmed the second cateogry of capital construction and production. In this way, any improvements in the people's livelihood was of course hard to realize and the satisfying the people's demands was out of the question. In these circumstances, the phenomenon of "production for production's sake" inevitably occurred. The first category was divorced from the second category and from the demands of the people's livelihood, carried out production for simply the development of its own category, and even carried out self-circulation within each category. In this way, the aim of socialist production could not be realized in the best way. Does the aim of socialist production not satisfy the ever-growing material and cultural demand of the society and people but satisfy the self-circulation within the various sectors of the first category? Of course, the importance of the first category brooks no doubts. Without steel and coal of fine quality and abundant quantity, the petrochemical industry and machine-building and other departments, the various second cateogry departments will hardly develop,

hence the demands of society and the people cannot be satisfied. Therefore, we must not negate the importance of the first category because of opposing the wrong of "production for production's sake." With the proportionate and planned integration of production of the first category and that of the second category, the aim of socialist production can readily be seen by the people, thus enabling the people to understand more clearly the superiority of the socialist system and winning greater support from the broad masses of people.

4) It is necessary to raise the enthusiasm of the working people for production by material encouragement while ideologically raising the socialist consciousness of the masses of working people. That is to say, the people are expected to understand that if they deviate from the interests of the whole, personal interests cannot be guaranteed; if they deviate from the long-term interests, we will cease to be able to meet the immediate interests. In the matter of distribution of consumer goods, it is necessary to gradually implement the socialist principle of to each according to his work which takes labor as the only yardstick. If egalitarianism is allowed to continue, it is inconceivable to hope that socialist production will develop by a large stride.

5) The production responsibility systems should be introduced both in socialist industry and agriculture. Of course, there are fundamental differences between the industrial production responsibility systems and the agricultural production responsibility system. The implementation of production responsibility is conducive to carrying out of labor discipline and the realization of scientific operating rules and guarantees product quality. In the process of implementing the eight-character policy of readjustment, restructuring, consolidation and improvement, the introduction of production responsibility system and the carrying out of strict labor discipline and technical operating rules will become the important curricula of restructuring and consolidating.

6) To do a proper job in the socialist economy, it is necessary not only to raise the socialist consciousness of the laboring masses ideologically but also raise the technical level of the technical personnel and those working in science and technology. This is a necessary condition for improving the productive forces of enterprises. The more modern the country is, the more it needs personnel with high technical levels. Improving the scientific and technical levels and training the scientific and personnel in new techniques are not things that can be accomplished in a single day. We must acknowledge that China's current levels of science and technology are backward when compared with those of the developed countries in the West. This does not mean that we should become discouraged. It requires that we continue to exert ourselves and fight to improve China's scientific and technical levels, raise our social productive forces and increase our labor productivity.

The Chinese people are a people with high aspirations. The CCP is a long-tested and great party. Without the CCP, there would be no new China. This is hard fact.

It was no other than the CCP that led the Chinese people in overthrowing the three big mountains and smashing the feudal and comprador relations of production; it was none other than the CCP that smashed the "gang of four" and corrected the "leftist" guiding ideology existing within the party. It is unimaginable for China's new democratic revolution, its socialist revolution and socialist construction will break away from the CCP. "Only socialism can save China." Taking the socialist road under the leadership of the CCP is the basis for the people's democratic dictatorship and our guide is Marxism-Leninism-Mao Zedong Thought. We can advance steadily and should continue to sum up experiences. Under the leadership of the CCP, the Chinese people will implement the eight-character policy of readjustment, restructuring, consolidation and improvement which will lead to perfecting the socialist system while simultaneously correcting any shortcomings in it. This will lead to the development of material production and the enhamcement of spiritual civilization. The Chinese people will surely be able to continue to bring the superiority of the socialist system in to play in accordance to the demands of objective economic and natural laws.

CSO: 4006/477

SOCIALIST TRANSFORMATION DISCUSSED BY 'JINGJI YANJIU'

HK250826 Beijing JINGJI YANJIU [ECONOMIC RESEARCH] in Chinese No 7, 20 Jul 81 pp 25-33

[Article by Wu Chengming [0702 2110 2494] of the Economics Research Institute of the Chinese Academy of Sciences: "The Socialist Transformation of Capitalist Industry and Commerce Is a Victory of Marxism in China"]

[Text] "The resolution on certain questions in the history of our party since the founding of the People's Republic of China adopted at the 6th Plenary Session of the 11th CCP Central Committee has profoundly summed up both positive and negative historical experiences of socialist revolution and construction in the 32 years since the founding of the People's Republic. This is of utmost significance in guiding our work in the socialist modernization and construction and various fields in the days to come. Now I would like to discuss my understanding of the problems concerning the socialist transformation of capitalist industry and commerce in our country which has come from my study of the "resolution."

The socialist transformation of capitalist industry and commerce in our country is the materialization of the strategic thinking of Marx, Engels and Lenin concerning the proletariat overthrowing the bourgeoisie. It is the embodiment of Lenin's policy of enforcing state capitalism under the dictatorship of the proletariat, and substantiates Marxist theories concerning the transition period by adopting the guideline of uniting, educating and transforming bourgeois elements while transforming the production relations. The accomplishing of this transformation is the victory of Marxism in China.

The Level of Capitalist Development in Old China

Socialism is the developed negation of capitalism. It is quite obvious that socialist revolution and the socialist transformation of the national economy will never happen in a country without a fairly developed capitalist economy and a relatively powerful proletariat.

Old China was a semicolonial semifeudal country, where capitalist production was just like a small isolated island emerging from an ocean of individual agriculture and individual handicrafts industry. Yet, it was still developing. Below is a table based on my preliminary calculations.

Table 1. The Level of Capitalist Development in Old China

Year	The percentage proportion of modern industry to the total output value of industry and agriculture	The percentage proportion of modern industry and workshop handicrafts industry to the total output value of industry and agriculture	The percentage proportion of modern communications and transportation to the total revenue of communications and transportation industry
1920	4.9	10.8	45.6
1936	10.8	20.5	51.0
1949	17.0	23.1	

Note: Modern industry denotes those enterprises employing machines and mechanical power in production, which includes mining. The modern communications and transportation industry includes railway, highway, shipping, aviation, telecommunications, and so forth.

Until the eve of the liberation, capitalist production still only amounted to around 20 percent of the total output value of industry and agriculture. But, it controlled the banking system, the trunk lines of water and land transportation, the import-export trade and the markets in large cities throughout the country. Capitalism had dominated the lifeline of the national economy. And in the 1920's, the Chinese proletariat arrived on the political arena and took up the lofty mission of leading the Chinese revolution.

In old China, although the capitalist production relations were fairly developed, the basis of the productive forces still remained quite weak. With liberation in 1949, modern production equipment in the whole country only amounted to 12.8 billion yuan. In other words, the fixed assets amounted to only 12.8 billion yuan in 100 years after the rise of modern industry in old China. Today, in our country, the industrial fixed assets exceed 400 billion yuan, and grow by tens of billions every year. By these facts, we can see how meager a heritage old China had left to us. However, our socialist construction and the modernization of the national economy had to start from this weak basis, which was determined by the history.

According to the principles of Marxist political economy, socialism must be based on socialized great production; in other words, it highly requires developed productive forces. Yet it is in a country with underdeveloped productive forces that the Chinese revolution was victorious. That brought about a very serious contradiction.

The solution to this contradiction is neither to return to capitalism nor to hesitate and wait, but to rely on Marxism, in particular the transition period theory which Lenin formulated in the light of the conditions in Russia, "a state of the extremely backward petite bourgeoisie (in particular, the peasants)." Integrated with the historical reality in China, it brought about the party's general line for the transition period which was put forth by Comrade Mao Zedong in March 1949 and adopted at the meeting of the Political Bureau of the CCP Central

Committee in June 1953. The general line advocates the "basic realization in a rather long period, the nationwide industrialization and the socialist transformation of agriculture, the handicrafts industry, capitalist industry and commerce." This is a line which develops modern productive forces while simultaneously transforming the relations of production. Industrialization is the material basis for socialist transformation, and the socialist transformation must contribute to the development of the productive forces.

The State Monopoly Capitalism in Our Country

Is it possible for the weak capitalist economy in our country to undergo a socialist transformation?

Although the material basis of the capitalist economy in our country was quite weak, it was very concentrated. Before the war of resistance against Japan, it was mainly centralized under the control of the foreign capital enterprises established in China. The following table shows my preliminary estimations.

Table 2. The Estimation of Industrial Capital in the Whole Country in 1936

		Percentage Proportions of Each Category		
	Investment Value (billion yuan)	Foreign Capital Enterprises	Bureaucrat Capital	National Capital
Industry and mining	4.296	68.0	4.8	27.2
Communications and transportation industries	3.914	89.8	6.0	4.2
Total	8.210	78.4	5.4	16.2

Note: The investment value denotes in principle the next value of assets of enterprises in each category by calculating in today's currency.

Such a situation did not change substantially until the end of the war of resistance against Japan. The Japanese investment which made up 87 percent of total foreign investment, and the properties of the German and Italian fascists in China were then transferred into the hands of the bureaucrat-capitalist class. All the above, together with those assets gobbled up during wartime by the enterprises run by the Kuomintang bureaucrats, formed the bureaucrat capital which amounted to around 80 percent of the total fixed assets of the industrial, mining, communications and transportation enterprises, thus became a genuine state monopoly capitalism.

Such a state monopoly capitalism, in its nature, had already become socialized great production. Its major part (including the former foreign investment portion) had reached a fairly high level of production technology. Lenin said, "The state monopoly capitalism is the most complete material preparation for socialism. It is the beginning toward socialism, a step on the historical staircase from which one can climb up to another step called socialism. There is no middle step in between." ("Selected Works of Lenin," "What Is the Way Out to Imminent Disaster?," Vol 3, p 164) Obviously it would be a monstrous absurdity if the proletariat would be the least hesitant in transforming this capitalist part of economy into a socialist one after they had seized the political power.

Having confiscated all bureaucrat capital, the party and government built up a powerful state-owned economy through democratic reform and production restructuring. So 80 percent of the socialist transformation of the capitalist economy was accomplished. The production in the state-run industries rose from 3.73 billion yuan in 1949 to 15.12 billion yuan in 1952, a three-fold increase in 3 years. This fact proved that we have been correct in liberating the productive forces.

State Capitalism in Our Country

To transform the national capitalist economy step by step through the stage of state capitalism was the policy put forth by Lenin after the October revolution though it was not carried out then. Lenin pointed out that the development of capitalism is inevitable when hundreds of thousands of small-scale production enterprises still exist. "Since we still cannot realize the direct transition from small-scale production to socialism," we have no alternative but "to bring such a development onto the track of state capitalism," and make use of state capitalism "as the intermediary link between small production and socialism, as means, a path and a method of increasing the productive forces." (ibid, "On the Grain Tax," Vol 4, pp 519, 525)

Lenin's initial idea was actually materialized in our country. Moreover, the nature of state capitalism under the dictatorship of the proletariat was further ascertained in the practice. While the form of state capitalism at different levels were created and regularity of their development was revealed.

The first step is to turn the laissez-faire capitalism which was blindly developed and operated in an anarchical way into the capitalism which would be under the control of the state's administration, the leadership of the state-owned economy and the supervision of the worker masses; or in Lenin's words, the state capitalism which "we can restrict and regulate in terms of its limits of activities." ("Collected Works of Lenin," "The 11th Congress of the Russian Communist Party (Bolshevik). Political Report of the Central Committee of the Russian Communist Party (Bolshevik)," Vol 33, p 244) This task was completed in 1952. During that period, privately operated industry grew at a rate of 10,000 a year, and their total output value increased by 54.2 percent in 3 years. The following table shows detailed figures.

Table 3. The Development of Privately Operated Industry and Commerce in 1949-1952

	1949	1950	1951	1952
Privately operated industry:				
Number of households (10,000)	12.30	13.30	14.76	14.96
Workers and staff (10,000)	164.38	181.59	202.28	205.66
Total output value (100 million)	68.28	72.78	101.18	105.26
Privately operated commerce:				
Number of households (10,000)		402	450	430
staff (10,000)		662	740	676
Retail sales value (100 million)		101.0	132.8	121.9

Since 1953, capitalist industry and commerce began to be merged in a planned way into various forms of state capitalism.

State capitalism in our country was an integration of and a cooperation between the socialist economy and the capitalist economy in varying degrees under the leadership of the socialist economy. The differences in degrees lead to it being divided into primary, advanced and superior classes.

The primary form of state capitalism may be represented by the privately operated industry which received processing orders from the state-owned economy. It was the integration of and cooperation between the socialist and capitalist economy outside enterprises or in the course of circulation. It enabled the production of privately-run enterprises to merge into the track of state plan, brought the productive forces into play, and expanded the socialization of production. The development of orders of processing is shown in table 4.

Table 4. The Development of Processing Orders in 1949-1955 (monetary unit: 100 million yuan)

	1949	1950	1951	1952	1953	1954	1955
1)	68.28	72.78	101.18	105.26	131.09	103.41	72.66
2)	8.11	20.98	43.21	58.98	81.07	81.21	59.35
3)	11.88	28.83	42.71	56.04	61.84	78.53	81.69

1) stands for the total output value of privately-run enterprises in the whole country; 2) stands for the portion of processing orders in the total output value; 3) stands for the percentage of 2) to 1).

Note: The output value of processing includes the portions of purchasing, state monopoly for purchase and marketing.

After 1954, as many privately-run enterprises were transformed into joint state-private enterprises, the output value of processing orders did not rise a lot or even decrease. With the portion due to the transformation from privately operated enterprises to joint state-private enterprises reduced, the output value of processing orders increased in 1954 by 19.3 percent over 1953, whereas in 1955 it increased by only 1 percent over 1954.

The advanced form of the state capitalism is joint state-private ownership, which is cooperation between the socialist economy and the capitalist economy components inside enterprises in the course of production. The prodiction relations underwent a fundamental change, since the means of production which had been privately owned before were now under joint state and private ownership, the socialist component took the dominant position and the production and operation of enterprises were included in the state plan. Therefore, the joint state-private ownership was the decisive step in the whole socialist transformation.

The state-private ownership enabled production in enterprises to be further socialized, and greatly liberated the productive forces. This can be seen in the yearly growing of the fixed output value and the gradual rising of workers' productivity shown in table 5. Until 1955, the productivity of workers in joint state-privately owned industry was about double of that in privately operated industry. The new ownership also proved to be very effective in saving raw materials and lowering costs. In the years of 1950-1955, the state-privately owned industry throughout the country gained a total profit of 1.273 billion yuan, thus making improvement of equipment and the expansion of reproduction possible.

Table 5. The Development of State-Privately Owned Industry in 1949-1955

	1949	1950	1951	1952	1953	1954	1955
1)	193	294	706	997	1,036	1,746	3,193
2)	10.54	13.09	16.63	24.78	27.01	53.33	78.49
3)	1.30	2.40	3.28	5.37	6.93	14.00	18.75
4)	2.20	4.14	8.06	13.67	20.13	50.86	71.88
5)		2.58	5.44	10.66	17.54	25.26	52.34
6)		17.3	31.4	32.2	28.3	25.5	2.9
7)		4,257	6,553	9,297	10,880	13,401	13,358

1) The number of households
2) The number of workers and staff (10,000 persons)
3) Capital value (100 million yuan)
4) Total output value (100 million yuan)
5) Fixed output value (100 million yuan)
6) The increase in fixed output value over the previous year's total output value (percent)
7) Output value per worker (yuan)

Note: Joint state-privately owned enterprises were usually formed with several privately-run enterprises, therefore this table cannot be compared with table 3. Fixed output value is equal to this year's total output value minus the output value made by enterprises which had been transformed into joint ownership that year.

In the high tide of the socialist transformation in 1956, the conversion of all capitalist industry and commerce into joint state-private ownership in the whole trade was completed in its entirety, and the fixed interest system was carried out.

The enforcement of the whole-trade joint state-private ownership combined with the system of fixed interest was the superior form of state capitalism in our country. Under such a system, all the means of production for enterprises were distributed in a unified way, private investments would no longer play a role as functional capital, and capitalists would no longer engage in the operation and administration of enterprises in the power of capital proprietor but as a staff member named by the state. The enterprises would become wholly socialist as soon as fixed interests were terminated.

The Problem About the Speed of Transformation

According to the party's general line for the transition period, socialist transformation would be basically realized in quite a long period which would last for 15 years (from 1953 onward) or even longer as depicted in the tentative plan. However, a problem rose--since socialist transformation was basically completed in 3 years or more owing to the transformation high tide in 1956--whether the transformation had been enforced too fast and whether such a "hightide," as a form of the transformation, was rational.

As gifted at the very beginning with the regularity that developing things evolve from elementary to advanced stage and from quantitative to qualitative change, the state capitalist structure in our country possessed a self-accelerating mechanism. But, such a mechanism could not be initiated spontaneously; it would work only when people were knowledgeable about objective economic laws, and dealt with and steadily overcame contradictions. The transition from processing orders to the joint state-private ownership had undergone such a process.

Such a transition was carried out in household after household according to annual plans. In 1954, 793 enterprises were transformed; in 1955, 1,091 enterprises; both were not on a large scale. But all of those enterprises were formerly the larger ones in privately operated industry. Therefore, in 1955 the output value of joint state-privately owned industry had already amounted to 49.7 percent of the total output value of both state-privately owned and private enterprises, and the capital value of the joint state-private enterprises had even made up 69.8 percent of the total capital value of both kinds of enterprises. In other words, just before the hightide, half of the enterprises in terms of the productive forces, and 70 percent of them in terms of ownership, had already been basically transformed. What had been left to be solved in the hightide was the problem concerning the remaining half and 30 percent.

The utmost difficulty we faced then was the contradiction between the joint state-private enterprises and the private ones. At that time, if a plant was transformed from private ownership into joint state-private ownership, its output value in the first year after the transformation would on average rise by 30 percent over that made before the transformation, thus creating problems for the untransformed small plants in the same trade in distribution of production order, supply of raw materials and marketing. In some cases, capitlaists even fell into such dire straits that they were unable to pay workers' wages. This kind of contradiction was even more acute in commercial sectors. So, in order to eliminate this contradiction, the central authorities put forth in the latter half of 1954 the policy of overall consideration and all-round arrangement, and in the first half of 1955 the policy of "eating grapes" (that is to say, state-run departments undertake the whole production operation of those privately run trades which suited market demands one trade after another.) Then in the latter half of 1955 the whole trade joint state-private ownership in industry and commerce was trial-enforced in Beijing and Shanghai. Therefore, the whole trade joint state-private ownership was not a creation of the mass movement in the hightide but the comprehensive popularization of the above-mentioned experiences.

For the above reason, the transformation of whole-trade joint state-private ownership speedily completed in the hightide actually resulted in fairly good results in terms of direct economic results. The output value of the joint state-privately operated industry increased by 30 percent over 1955; the sales value of joint state-privately owned shops, cooperative shops and cooperative groups increased by 15 percent over 1955. Of course, this was partly due to the consolidation of the transformation results and vigorous help from the state.

The socialist transformation of capitalist industry and commerce was not carried out in isolation, it was closely related to the socialist transformation of individual economy, in particular that of agriculture. Lenin looked upon state capitalism as the link joining small production and socialism in consideration of the greater difficulty of transforming the agricultural individual economy which is basically carried out by manual labor. The collectivization of agriculture was completed in the Soviet Union 10 years or more after than the nationalization of industry. The case in our country was quite the contrary. In 1953, there were 15,000 agricultural production cooperatives throughout the country, less than 1 percent of the total agricultural households joined these cooperatives. In the summer of 1955, the number of cooperatives increased to more than 430,000. In the latter half of that year, the socialist hightide in rural areas was unfold, and the collectivization was realized in quite a few provinces and cities in the same year. In the summer of 1956, the agricultural households which joined cooperatives amounted to 91.9 percent of the total agrarian households in the whole country, and the collectivization of agriculture was basically completed.

As the vast majority of our country's population spread over rural areas, cities had to strive to keep pace with rural areas where socialist transformation had been completed. A socialist country, with the transformation of industry and commerce in cities accomplished, can still retain some portion of private agriculture in rural areas. That is acceptable and also usual in the history. However, if capitalist industry and commerce are still retained in cities while the transformation of agriculture has already been completed, that can hardly be imaginable. The hightide of whole-trade joint state-private ownership in 1956 was in fact pushed ahead by the socialist high tide in rural areas. In those days, whenever news came from rural areas, not only the departments and comrades who were in charge of the transformation of industry and commerce felt the heavy burden, but also hundreds of thousands of private industrialists and businessmen felt they were on tenterhooks. In the spring of 1956, starting from Beijing, capitalist industrialists and businessmen, one after another, began to make application for transforming their enterprises into joint state-private ownership. Such a development is quite understandable.

The high tide of whole-trade joint state-private ownership was pushed ahead in the form of the mass movement. Nevertheless, at that time, whether party committees or united front departments at different levels from central down to the local paid close attention to the enforcement of the transformation. While at the same, all state-run industry and commerce departments, industrial and commercial administrative departments and labor unions, industry and commerce federations, China Democratic National Construction Association at all levels, and so forth, all of them worked conscientiously and spared no effort in carrying out the transformation. This is entirely different from the haphazardness and mess which we witnessed during the later "great leap forward" and the 10-year upheaval.

In spite of this, we will have to admit that the speed of the transformation in 1956 was a little bit too fast, and thus brought about some prematurity in the whole-trade joint state-private ownership and some shortcomings in our work.

First of all, the extent of joint state-private ownership was too wide. In 1954, 96.4 percent of the privately run industrial enterprises belonged to workshop handicrafts industry. As their productive level remained relatively low, in effect, they were not suited for extensive transformation into joint ownership. While at the same time, 96.4 percent of the privately run commerce were small shopkeepers and peddlers, 1.6 percent employed fewer than 2 persosn, all of them were only suitable for transforming into cooperatives or maintaining private ownership. All these circumstances were certainly considered then, and many forms were utilized in the transformation. The results can be seen in table 6 and table 7. But in general, the extent of joint state-private ownership was still too wide, the areas designated for collective economy and private ownership seemed a little bit too small. On the other hand, there were more than 48,200 handicrafts households which joined the joint state-private ownership on their own during this period. They were requested to resume private ownership in the readjustment later, but the policy was not thoroughly carried out.

Table 6. The Transformation of Privately Owned Industry in 1956

	Number of households (1,000)	Number of staff and workers (1,000)	Total output value (million yuan)
The results in 1955 after the first transformation	88.80	1,310	7.266
1. Those transformed into joint state-private ownership	67.23	1,075	6,545
2. Those shifted into local state-run enterprises	1.00	23	98
3. Those designated for the transformation of handicrafts industry	15.60	117	299
4. Those transformed into joint state-private ownership or others	7.10	81	295
5. Those retaining private ownership	0.87	14	29

Table 7. The Transformation of Privately Owned Commerce in 1956

	Number of Households (1,000)	Number of staff and workers (1,000)	Capital Value (million yuan)
The results in 1955 after the first transformation	2,423	3,138	841
1. Those transformed into state-run enterprises and supply and marketing cooperatives	147	224	--
2. Those transformed into joint state-private ownership	401	877	601
3. Those transformed into cooperatives	1,443	1,723	184
4. Those retaining private ownership	432	494	56

Footnote: There were 757,000 or more households in the privately operated catering trade, 327,000 or more households in the privately operated service trades. They were transformed in a form generally like that of the privately owned commerce.

Second, the economic restructuring after joint ownership transformation was somewhat overdone. As economic organizations must conform to the level of productive forces and the market demand, the central authorities put forth the restructuring principles of popularizing coordination between specialized departments and "carry out readjustment in a number of enterprises while preserving the status quo in most of them" as soon as the whole-trade joint ownership transformation was completed. However, because of the impact of the high tide, these principles were not completely carried out. Although specialized companies as leading mechanism were set up, too much emphasis was placed on "changing" in the readjustment. Statistics compiled in June 1957 shows that among those plants which were transformed into joint ownership during the high tide, about half were merged, and only one-third adopted integrated administration. And again, unified accounting was enforced in more than half of the latter. The practice of eating in the same canteen was unfavorable to giving play to the enthusiasm of small plants.

However, it is the later "great leap forward" that worsened all those weaknesses. During the "great leap forward," the barrier between joint state-private ownership and state ownership and that between joint state-private ownership and collective economy were broken down. As policies were carried out without substantially understanding, enterprises were either cut down, or merged or transformed or integrated which all culminated into a mess. Thus, what followed was a lot of problems.

Because too many enterprises were merged and integrated, aiming at the expansion of scale and the seeking of comprehensiveness, production was made unitary, and the variety of products reduced. As points in the commercial network were insufficient, the circulation of commodities was blocked. Many small industrial and commercial households which formerly were independently run and helped to the society's economy, were losing their positive functions. This problem was not solved until 1980 when the collective economy in towns had been resumed and fostered, and due attention had again been paid to the ownership of enterprises under the collective ownership system.

Because of this transformation, a great number of small proprietors, small handicraftsmen, small peddlers were involved in changes concerning the joint state-private ownership or regarded as "representatives of private party" and the equivalent to the bourgeoisie. This doing confused the class barrier and harmed their enthusiasm in production. Again, this problem was not solved until 1980 when the instruction was issued by the central authorities to correct the mistake.

The joint state-private ownership was originally designed to fit to the fairly backward productive forces of the capitalist economy in our country. The reason was that we could not directly transit to socialism from such a basis. However, when the whole-trade joint state-private ownership had been enforced less than 2 years, the system of coordination between specialized departments had just been set up, and the joint ownership had not yet been able to fully work, the "great leap forward" started and threw everything into disarray. We could have envisaged a better situation if the system had been preserved until 1966 when the fixed interest was terminated.

On the Redemption Policy

More than 100 years ago, Marx and Engels pointed out in "The Communist Manifesto" that after having seized that political power of a state, the proletariat "will make use of their own political rule to seize all the capital of the bourgeoisie step by step; to centralize all the tools of production under the control of the state, that is, the proletariat will organize to form the ruling class and to raise the total volume of the productive forces as soon as possible." ("Selected Works of Marx and Engels," Vol 1, p 272) That is exactly what we did during socialist transformation.

"Deprive those who deprive," is the basic principle of socialist revolution in the economic field. But in what way this principle is to be carried out will depend on the historical conditions. In "The Fundamental Principles of Communism," Engels proposed a number of possible ways including confiscation and redemption. Marx also pointed out that to accomplish this task by redemption will be "the cheapest way" for the proletariat. (Ibid, "The Agrarian Problems in France and Germany," Vol 4, p 315) They did not discuss under what conditions the redemption should be carried out, because they had no such experience in this regard. "To attempt to answer in advance" would only have "resulted in a fantasy." (Ibid, "On the Housing Problem," Vol 2, p 545)

After the October revolution in Russia, Lenin put forth the policy of combining redemption with the state capitalism. He advocated carrying out the policy of redemption for those civilized capitalists who would accept state capitalism, and resolutely punish those uncivilized capitalists who were doing evil. Nevertheless, this plan of Lenin was never properly enforced.

Lenin's idea was implemented in our country, and various forms of redemption were also derived in actual practice. The development of the forms of redemption reflected the change of the production relations of the state capitalism in different stages, and also the fact that the production of surplus value was more and more restricted. On the other hand, as a system, redemption will in turn have impact on the development of the state capitalism and on the transformation of the production relations and that of bourgeois elements.

Redemption is not a transaction, not simply purchasing of the means of production from capitalists, but a firm class policy of the proletariat, or in other words, a strategic guideline for the socialist revolution. It is different from the compensation offered when nationalization is enforced in a country at present. The crux of redemption in our country is that the proletariat, while working and producing for the people's needs, offer as well as a share in the profits with capitalists.

The redemption in our country can be generally divided into two stages: Before and after the enforcement of the whole-trade joint state-private ownership in 1956. In the first stage, we took the measure of profit distribution, a typical example was the method of "four horses sharing food" adopted in 1953, in which the share to capitalists could have amounted to 25 percent of total profit. In the second stage, redemption was carried out in the way of fixed interest, that is, issuing fixed dividend in accordance with the amount of private shares in joint state-private enterprises. Generally, the annual interest was 5 percent, and the fixed interest continued to be issued for 10 years.

The content of the redemption in the stage of interest distribution is shown in table 8. There is one point I should make clear about the table, those among the privately run enterprises whose accounts could be examined (the so-called account checking households) were only a few, therefore, the items given in the table are only rough appraisals based on sampling survey. Enterprises suffering from losses are not included in the table because they were not subject to redemption under the system of profit distribution. The item of proprietor's income includes both capitalists' income from profit distribution and the total income of the representatives of capitalists and some small proprietors. That is because of the unsoundness of the accounting system in many enterprises which made it difficult to distinguish one part from another. Anyway, that does not cause a great discrepancy in terms of percentage. Based on this percentage distribution, the income of proprietors in the 6 years was roughly 1.4 billion yuan.

Table 8. The Appraisal of Profit Distribution for Privately Run Enterprises in 1950-1955

		Profit Distribution in Percentage			
Total value of profit (100 million yuan)		Income Tax	Income of Proprietors	Other Distributed Items	Undistributed Parts
1950	8.31	26.53	31.54	14.42	27.51
1951	16.41	36.50	24.11	14.32	25.07
1952	7.80	35.28	28.99	16.17	19.56
1953	16.98	39.87	16.48	20.78	22.87
1954	7.42	38.01	19.66	19.06	23.27
1955	4.71	35.27	21.21	19.82	23.70
Total	61.63	36.02	22.87	17.34	23.77

Footnote: Privately run industry, commerce, catering industry and service trades are included.

During these 6 years, dividend and bonuses distributed to private shareholders of joint state-private enterprises amounted to about 100 million yuan.

The enforcement of fixed-interest system after the whole-trade joint state-private ownership is shown in table 9. The fixed interest rate was not a uniform 5 percent for all trades. But, it is still proper if we calculate based on the total value of private shares given in table 9, and in a rate of 5 percent and in a term of 10 years. Appraised in that way, the total value of fixed interest turns out to be 1.15 billion yuan.

Table 9. The Issuance of Fixed Interests in Joint State-Private Enterprises in the First Half of 1956.

	Number of households adopting fixed-interest system	Value of private shares (100 million)	Percentage of private shares to the total capital	Due dividend for the first half of 1956 (10,000 yuan)
Industry	43,687	17.83	77.27	4,455.5
Commerce	97,235	3.53	15.29	881.0
Catering industry	14,408	0.18	0.80	44.9
Service trades	12,741	0.36	1.57	91.0
Transportation	22,828	0.75	3.24	174.3
Banking	3	0.42	1.83	112.9
Total	190,902	23.07	100.00	5,757.6

The grand total of the three big items [the three items include the income of the proprietors of private enterprises in 1950-1955, the dividend and bonus distributed to the private shareholders of joint state-private enterprises for the same period and the total value of fixed interests issued to the private shareholders in the 10 years after the whole-trade joint state-private ownership was realized] is roughly equal to the original capital of the bourgeoisie.

Apart from these, the redemption from capitalists also included the salaries which enterprises paid to capitalists at and which were higher than the salary level for the same posts in state-run enterprises. The high salaries of all these capitalists were maintained after the transformation of joint state-private ownership.

At large, our policy of redemption was quite reasonable, which satisfied the bourgeoisie and played an important role in pushing ahead with the transformation. During the 10-year turbulence, the fixed interest due to industrialists and businessmen was withheld and their high salaries were reduced. In 1979, the central authorities decided to pay back all fixed interest and salaries that had been withheld, and resume the high salaries which had been lowered, return all deposits which had been confiscated and frozen. Indeed this is "to carry out the redemption through to the end."

The Transformation of Bourgeois Elements

The socialist transformation of capitalist industry and commerce in our country included the transformation of bourgeois elements, which aimed at helping them to change themselves from being exploiters by gradually becoming laborers in the socialist society.

Based on the Marxist dialectic principle concerning social being and consciousness, Comrade Mao Zedong always advocated that everyone needs to be transformed in order to further the revolutionary cause and that men can undergo transformation. Back in 1977, he pointed out in "On Practice" that the struggle of the proletariat and the revolutionary people to transform the world includes "the transformation of the objective world as well as that of their own subjective world" and "the so-called objective world to be transformed includes all those who initially reject transformation." ("Selected Works of Mao Zedong," Vol 1, People's Publishing House, 1966 horizontal setting edition (similarly hereinafter), pp 272-273) After the victory of the democratic revolution, he emphatically put forth again, in his articles such as "On the People's Democratic Dictatorship," "Problems Concerning the Correct Handling of the Contradictions Among the People" and so on, the problems concerning the transformation of bourgeois elements.

Our country's national bourgeoisie is a class with dual character--they possess a revolutionary character on one hand, and a tendency towards compromise on the other. Their contradiction with the working class is a contradiction within the people. The transformation to them should be processed in a democratic way, that is, the way of criticism and education. The party's policy towards them can be summed up in unity, education and transformation.

The transformation of bourgeois elements was carried out along with the transformation of capitalist enterprises. During the whole with the transformation of enterprises through the state capitalism, capitalists were not excluded but involved in the evolution. In fact, a lot of concrete transformation works were done by themselves. Hence their ideology could be transformed step by step through the transformation of production relations, through production struggle and class struggle. This helped to eliminate obstacles and spur the transformation of the ownership system.

Our country's national bourgeoisie was one of the classes in the old China which were comparatively cultured and possessed more intellectuals. Therefore, the transformation of bourgeois elements, combined with personnel arrangement, was enforced as a task to bring every positive factor into play and make use of their scientific and technological knowledge and operational and administrative experiences. It should be noticed that during the 10-year turbulence, as enterprises were transformed from joint state-private ownership into state ownership, the original personnel allocation was shaken, most of the former industrialists and businessmen were transferred to do manual labor or dismissed, and the learning system, contest and appraisal system, health and welfare system for them were destroyed. Indeed this was a great loss for the transformation cause. These wrong doings have been mended step by step only after the defeat of the gang of four.

In our country, the transformation of bourgeois elements was proposed as a great task of the proletariat to transform the world and abolish classes. When the democratic revolution won the victory throughout the country in 1949, Comrade Mao Zedong already made the transformation of members of the reactionary ruling classes which had just been overthrown by the people a task in thoroughly carrying on the democratic revolution. He also pointed out, "If this job is well done, the major exploiting classes in China, that is, the landlord class and the bureaucrat bourgeoisie or in other words, the monopoly bourgeoisie, will eventually be eliminated." (Ibid, "On the People's Democratic Dictatorship," Vol 4, p 1,414) In 1957, after the socialist transformation of the ownership system had been completed, he said, "It is imperative to digest them. To transform landlords and capitalists into laborers, this is also one of the strategic guidelines. To abolish classes will take a very long time." (Ibid, "Speech At the Meeting of Party Committee Secretaries of Provinces, Cities and Autonomous Regions," Vol 5, p 342) To transform through unity and to abolish classes through digesting exploiters, this is exactly our guiding principle.

The transformation of exploiting class members on such a large scale and such a planned way was a pioneering work in the history. It provided new experiences to the proletariat revolution and the international communist movement, and made contribution in replenishing the Marxist theories concerning the withering away of classes.

Today, the feudalist and capitalist exploiting systems have been abolished in our great country (except the province of Taiwan). The landlord class and the rich peasant class as classes have been eliminated. So did the capitalist class. After 30 years' education and struggle, the great majority of them who have working ability have already been transformed into laborers of the socialist society; and most of the rest are patriots who support the socialism. This is a great victory of Marxism-Leninism-Mao Zedong Thought.

CSO: 4006/477

NATIONAL POLICY AND ISSUES

'JINGJI YANJIU' PROBES TIANJIN RETAIL TRADE

HK260135 Beijing JINGJI YANJIU [ECONOMIC RESEARCH] in Chinese No 6, 20 Jun 81 pp 27-33

[Article by Zheng Ning [6774 1337] and Wang Shiquan [3769 1102 0356] of the Economics Research Institute of Tianjin Academy of Social Sciences: "Investigation on Responsibility for One's Own Profits and Losses in Trial Points of Tianjin State Run Retail Trade"]

[Text] During the implementation of the eight-character principle which centers on readjustment, beginning from September 1980, the Tianjin Financial and Trading Commission carried out investigation on the trial points of reforming the system and expanding enterprise autonomy in 24 retail shops of nonstaple food, general merchandise, sweets and cakes. The purpose of having such trial points is to solve the problem of the ownership system and the method of management and administration and to carry out the principle of distribution according to work, to change the phenomenon of "eating out of a big pot," to make enterprises relatively independent commodity operational units, to link the economic interests of enterprises and staff and workers with the management results of enterprises, to bring into full play the initiative of enterprises and staff and workers, to improve management, to enliven circulation, to improve economic effect and better serve production and the people's livelihood.

According to the financial system, trial points are divided into three types: The first one is to change from the system of turning over the profits to the state to the system of state taxation and to be responsible for one's own profits and losses. The number of units which have done so is 10. The second one is to retain the profits. The number of units which have done so is six. The third one is to be responsible for turning over the profits to the state on a trial basis. There are four units which have done so. Four collection ownership units have made the accounting units smaller and improved the way of management so as to bring into play the characteristics of collective ownership. Viewed from the angle of trial points, all units have generally achieved rather good results.

I

There are two different forms of trial points for independent accounting, substitution of tax for profits and responsibility for one's own profits and losses, which are carried out by the state-run retail trade.

The first form is "five taxes and one charge." The units which have implemented this method are Shiyi Jinglu Department Store and Shiyi Jinglu Nonstaple Food Store. They studied and adopted this method on the basis of the principle of retaining profits which was experimented with in 1979 and by referring to the categories of taxes and tax rate which were implemented in the past. The specific tax rate and charge rate are as follows: The industrial and commercial tax accounts for 3 percent of the total sales. In the real estate tax, the (annual) landed estate tax is 0.72 yuan per square meter, and the (annual) house property tax is 1.2 percent of the original value of the house property. The income tax is 40 per mill of the profits. The local additional tax is 15 percent of the income tax. The charge for using the circulating funds is 0.21 per mill.

The income readjustment tax due to the difference in grade is for readjusting the disparity of profit levels and the unevenness of hardship and happiness caused by nonsubjective reasons such as different trades, the scale of shops, the structure of commodities and the location where business is done. The rate for the readjustment tax of these two trial-point stores has been calculated under the prerequisite of retaining the profits. For instance, according to the experience over the years, the Shiyi Jinglu Department Store has defined that the proportion of the profits to be retained is 30 percent, while 70 percent is to be turned over to the state. After deducting the four kinds of taxes and the charge for the use of circulating funds, the balance in the amount turned over to the state is approximately 2.3 percent of the total sales. This is the rate for readjustment tax. The rate for readjustment tax of Shiyi Jinglu Nonstaple Food Store is 0.6 percent.

The second form is "proportional income tax." The units which have implemented this principle are the Tanggu District Jiefang Lu Department Store and the eight shops of the Qiandezhuang Basic-Level Vegetable and Nonstaple Food Store in Hexi District. This form has been defined according to the tax profits remitted to the state by the stores over the years, the amount of funds returned to the stores by the higher authorities and by considering other factors. Different stores have different rates. For instance, after deducting the returned amount, the Qiandezhuang Basic-Level Vegetable and Nonstaple Food Store, based on the average amount of the tax or profits turned over to the state in the past 3 and 1/2 years, defined that 58 percent of the total profits is to be turned over to the state as income tax and that 42 percent is to be retained by the enterprises themselves.

After the method of "substituting tax for profits" has been implemented, the profits after tax will be used as the enterprises' development funds, collective welfare funds and staff and workers' reward funds according to a certain proportion. All this is at the enterprises' disposal. Different units have different proportions of allocation. For instance, the proportional allocation of Shiyi Jinglu Department Store is 50:30:20; that of Shiyi Jinglu Nonstaple Food Store is 35:25:40; that of the Tanggu District Jiefang Lu Department Store is 40:20:40.

During the carrying out of the trial points of being responsible for their own profits and losses, the enterprises have done the following work:

(1) They have expanded enterprise autonomy in the trial point units. According to the stipulated range of use, the enterprises can, of their own accord, arrange to expand their autonomy in financial affairs and decide the amount of funds to be

retained by the enterprises. In expanding autonomy for running business, the enterprises have the right to arrange in a flexible way the variety of goods, the kinds of service, business hours and the way of running business, according to the situation of the market and the needs of the masses. In accordance with the rational orientation of goods and economic accounting, the enterprises have the right to select superior quality goods when purchasing the goods outside the plan from places of their choice. The enterprises should be given the right to control prices in a flexible way within a certain range. The prices of commodities of the third category purchased from elsewhere may be decided by the enterprises themselves, so long as these prices are below those of the local commodities of the same category and quality. The enterprises may reduce the prices of commodities which are damaged or have turned bad and which are unsalable or out of season. The enterprises should be given certain autonomy in labor management, including the autonomy to decide on and readjust labor organization. Under the quotas permitted by the state, they have the right to select good staff and workers for employment and to reward or punish staff and workers.

(2) They have set up a sound management system in various aspects. 1) They have set up a post responsibility system. The secretary, manager, accountant, buyer, counter group leader, warehouse keeper and seller have their own definite responsibility with each task being fulfilled by one person and publicized so that supervision can be carried out by the masses. 2) They have clearly stipulated regulations on a checking and reward system. They have worked out specific rules for checking and reward and punishment for the counter groups and staff and workers on how they fulfill their various tasks. For instance, sales quotas are assigned to each shop assistant. There are specific standards for checking the number of persons at work, the counter discipline, mistakes and errors, the quality of service and the variety of commodities. This is taken as a basis for the discussion of rewards to be issued to the staff and workers. Some stores have also carried out a 100-point system in recording the rewards. Thus the material interests of the staff and workers are closely linked with how business is run, and egalitarianism in allocation which was carried out in the past has now been changed. 3) Trial-point units have also intensified democratic management. Most of the units have elected counter group leaders and members of the Democratic Management Committee through democracy. The Tanggu District Jiefang Lu Department Store elected its manager through democracy. How the stores are run is closely related to the personal interests of the staff and workers, so democratic management is no longer a mere form, it has its concrete contents. Many staff and workers have made proposals to improve their work and expand business. Some stores have set up vocational research groups to find out about market supply and demand, to carry out market analysis and to advise the leadership.

(3) They have intensified ideological and political work. Trial-point units generally pay attention to doing a good job in ideological and political education, when carrying out the principle of material rewards. First is to make clear that the purpose of having trial points is not just for obtaining more money, but through the expansion of autonomy to further bring into play everybody's initiative, improve management, enhance the quality of service and serve production and the people's livelihood in a better way. Second is to carry out policy education and intensify the unity and mutual help among the staff and workers. Third is to cultivate advanced models, praise good people and good deeds in a timely manner and bring the initiative of the staff and workers into a correct orientation.

II

The carrying out of the trial point for being responsible for one's own profits and losses has closely linked the interests of the state, the interests of the enterprises and the interests of the individual. The enterprises' "power, responsibility and interests" are bound together. In this case, they have the internal motivation to run the enterprises well. The initiative of the staff and workers of the enterprises has been brought into better play and good results have been achieved.

(1) They have expanded business and enhanced the quality of service.

In the past, how the stores' business was run had nothing to do with the interests of the staff and workers. When business was run well and a lot of profits were realized, there was no increase in the income of the staff and workers; when business was run in a bad way and there was a decline or even loss in profits, the income of the staff and workers was not affected either. Therefore, only a few cadres were concerned with the purchase, marketing and stocking of the goods of the stores. The staff and workers very seldom paid attention to them. The shop assistants sold whatever had been purchased by the stores. Sometimes they did not even put the goods on the shelves until one design and color of goods was sold out. But now the situation has changed. Not only managers and counter group leaders pay attention to vocational work, but many staff and workers try every means to enliven business and do a good job in service. In respect of the origin of goods, they relied only on one channel, that is the wholesale departments. But now they can purchase goods by themselves. They can replenish their stock by buying goods from factories, foreign trade, street cooperatives, warehouses, communes and brigades and places outside Tianjin. The purchase procedures have been simplified and the variety of goods have been increased. Shop assistants not only supervise buyers in purchasing goods, but also go to the wholesale departments on their own initiative to check the variety of goods. They use various relations to open channels for the purchase of goods. The Shiyi Jinglu Department Store has established new relations for the purchase of goods with 28 units in the past 4 months and signed contracts with 14 units to act as an agent selling 89 kinds of commodities on a commission basis. The variety of goods being dealt with has amounted to 6,100 kinds, an increase of 24.3 percent over 1979 and 43.6 percent over 1978. The commodities purchased of their own accord have amounted to 254 kinds and 1.876 million yuan, which is 57.7 percent of the total volume of the goods purchased at the present stage.

In marketing, they have implemented the method of being diligent in purchase and quick in marketing and the method of small profits but quick turnover. They also do things for the convenience of the masses. For the convenience of customers, many stores and shops set up stalls to sell their goods, and according to the need of the customers, some stores and shops provide processing and repair services. The Shuguangli, Hongxiali and Daqing cake shops of Hexi District have extended their business hours. They send out people on their own initiative to factories, hospitals, streets and kindergartens to ascertain their needs. They deliver the goods to the door at an appointed time and place. In order to enliven business, Shiyi Jinglu Nonstaple Food Store has combined with Dagang Aquatic Breeding Farm in the suburbs in running a fresh water fish business. Qiandezhuang Nonstaple Food

Store and other units have set up market analysis groups whose members go to the wholesale departments, trade warehouses and free markets in the rural areas every day. They often visit the neighborhood residents and customers and investigate and study the trends of the changes in requirements, the situation of market supply and the situation of the changes in negotiated prices.

(2) They have strengthened accounting and improved the management of enterprises.

Before the trial points were carried out, the counter group of each store or shop generally had its own simple accounting, but the total accounting of various economic quotas was done by the accountant under the system of united revenue and expenditure and had little to do with the personal interests of the staff and workers, the system was often a mere form. In the present trial points, the stores or shops generally carry out the system of two-level accounting and management by the stores or shops and counter groups. The stores or shops convert the main economic quotas and service requirements into smaller quotas. Each group generally carries out the principle of "five fixes" (fixing sales, fixing profits, fixing cost, fixing mistakes and errors and fixing funds. Some units carry out the principle of four or six fixes). Responsibilities are assigned to each person. Marks and rewards are recorded related to the realization of quotas. For instance, Shiyi Jinglu Department Store carries out the principle of proportionate division of profits by the store and counter groups. The profits retained by the counter groups are used as rewards for the staff and workers. The Tanggu District Jiefang Lu Department Store issues rewards according to a certain rate of the total volume of sales. In addition, each store or shop has relatively expanded the counter groups' autonomy in running business (including the power to purchase goods, use funds, control expenses, handle damaged commodities and arrange personnel). Since the implementation of these methods, the staff and workers have become the masters; able to manage the affairs and property of the store and willing to put a lot of thought into how to enliven business and accelerate the turnover of funds. Once Shiyi Jinglu Department Store got a bank loan of 100,000 yuan to purchase from a foreign trade company a batch of children's acrylic sweaters and bed sheets which had originally been for export but had been shifted to the domestic market due to disqualification. According to the plan, they were to pay off the loan within 45 days. They mobilized all the staff and workers of the store to expand their sales by adopting the methods of small profits but quick turnover, of increasing the number of counters so as to accelerate the sales and delivery of the goods on their own initiative to the units under the system of collective ownership. For instance, according to the rules, the difference between wholesale and retail prices was 14 percent, but they altered it to 10 percent. As a result, the goods sold well and the turnover of these funds was accelerated. They paid off the loan within 12 days and gained profits of 20,000 yuan. Since the carrying out of accounting, a practice of thrift and diligence and of careful calculation and strict budgeting has been emerging. In the past, waste was rather serious in the use of packing materials in the Tanggu District Jiefang Lu Department Store. Now each group is responsible for the cost of packing materials. They carry out internal calculation of prices for packing materials. In the past 4 months they have saved more than 800 yuan in expenses for the cost of packing materials. The system in various aspects is well implemented, because the initiative and conscientiousness of the masses have been brought into play. In the past, no one cared for shortages of and damage to the commodities being stored. Now the receipt and delivery, storage, testing and examination of commodities are assigned to the persons concerned. Rules and regulations on rewards and punishment have been promulgated. Thus damage and shortages are reduced to the minimum. To balance the day's books has become the habit of the staff and workers of the store.

(3) The economic effect has generally been raised.

Various economic quotas of the trial-point units which are responsible for their own profits and losses are on the whole better than in the past. There has been a big increase in the volume of sales and profits. The turnover of the funds has been accelerated, the cost rate has been reduced and work efficiency has been enhanced. This change appears to be more outstanding if compared to that of nontrial-point units.

The following list shows a comparison between the various economic quotas of 10 trial-point units and of nontrial-point units. The percentage of increase and decrease from September to December 1980, is compared with the corresponding period of 1979.

	Undertakings of nonstaple food		Undertakings of general merchandise	
	5 trial-point units	6 medium sized markets	2 trial-point units	17 medium sized markets
Volume of sales	29.82	6.45	33.73	19.09
Work efficiency of all personnel	20.18	-1.93	39.59	11.29
Cost rate	-0.61	0.79	-0.21	0.06
Increase and decrease scale of cost rate	-11.02	13.93	-7.2	2.05
Profit rate of sales	1.63	-0.14	-0.25	-0.56
Increase and decrease scale of profit rate	41.05	-3.76	-4.19	-8.74
Number of days of turnover of funds	5.6	13.29	-4.33	3.24
Realized profits	82.81	2.45	28.07	8.69

	Undertakings of Candies and Cakes	
	3 Trial-point Units	Company System of Hexi District
Volume of sales	14	8.7
Work efficiency of all personnel	4.65	-2.77
Cost rate	-0.59	-1.03
Increase and decrease scale of profit rate	-9.15	-12.95
Profit rate of sales	1.82	0.58
Increase and decrease scale of profit rate	72.51	39.19
Number of days of turnover of funds	-3.1	16.12
Realized Profits	97.27	51.4

(4) There has been an increase in the income of the state, enterprise and individual.

According to statistics, the 10 trial-point units have turned over 769,000 yuan to the state within 4 months, a 35.27 percent increase over the corresponding period of last year.

In the past they carried out the principle of unified income and expenses, so the development funds and the collective welfare funds which could be allocated by the grass-roots stores were very small. They had to apply to the higher company for their expenses. Within 4 months, the 10 trial-point stores retained 92,000 yuan of enterprise development funds and 70,000 yuan of collective welfare funds for the enterprises' own allocation. These funds were used for expanding business, improving the working environment and increasing collective welfare institutions. It has solved some longstanding problems. With the development funds, both the Shiyi Jinglu Nonstaple Food Store and the Tanggu District Jiefang Lu Department Store have bought themselves a truck. The Shiyi Jinglu Nonstaple Food Store's original truck was dilapidated and they had to consign their goods for delivery. Sometimes delivery was not on schedule. The cost of freight for 1 year was so much that they could have bought a new truck with it. They applied to buy a truck a long time ago but were not permitted to do so. Now this problem has been solved. With the development funds, the Shiyi Jinglu Department Store has installed home-made radiators. With the welfare funds, they have structured the staff and workers' canteen and built a bathroom/shower unit. The long cherished hopes of the staff and workers have now been realized.

There has been an increase in the rewards issued to the staff and workers. Within 4 months of the carrying out of 10 trial-point stores, the average rewards for each person per month was 12.5 yuan more than in the corresponding period of the previous year.

There have also been some problems during the implementation of trial points, which must be studied and solved.

(1) Ideological and political work is not grasped firmly enough in some trial-point units. Attention is one-sidedly paid to profit quotas. There is a tendency to overlooking the socialist orientation of running a business. Very few units have resorted to unprincipled measures of running business and resorted to deception in order to make profits.

(2) Trial points are carried out only in a few retail units. The higher responsible departments such as the company of the district level, the company of the municipal level and the bureaus and wholesale departments concerned have not carried out the relevant reform work. Therefore, since the readjustment of the allocation of rights, limits and interests, contradictions between reform measures and the original system have emerged. From now on we should further study how to reform the whole circulation system and adopt appropriate measures to gradually solve this problem.

(3) The trial-point units have overcome egalitarianism in the issuance of rewards, and this has pushed the work forward. But the potential of some enterprises has not been fully estimated due to imperfections of some methods, and unevenness between hardship and happiness and the problem of rewards being a bit too high can still be found within the enterprises themselves and in a few units.

III

The practice of the trial points for a period of time has proved that in the two different forms of responsibility for one's own profits and losses, there is no difference in essence between the proportionate income tax and the original total volume of profits retained, except for changing the form in which the profits are turned over to the state into income tax. The carrying out of the method of "five taxes and one charge" is a step forward from the principle of retaining the total volume of profits, because the calculation of tax in the "five taxes and one charge" is based not only on the volume of the enterprises' profits but also on the volume of sales, the volume of profits, the area of the premises and landed estate and the amount of circulation funds which are used by the enterprises. Thus they have further broken away from the convention of "unified income and expenses" and have linked "power, responsibility and interests" more closely. It is far superior to the principle of retaining profits and of proportionate income tax.

First, it is beneficial for guaranteeing the stability of state revenue. The enterprises should pay taxes to the state, no matter whether they run their business well or not. In addition to industrial and commercial tax, there are readjustment tax, house property and landed estate tax and the charge for using circulation funds.

Second, it is beneficial for encouraging the enterprises and the staff and workers to further improve the management of enterprises. They should strive not only to increase the volume of profits, but also to reduce the cost, accelerate the turnover of funds and raise the profit rate of funds and profit rate of sales. In carrying out this method, the proportion of tax paid to the state per month varies as to how business is run in that month. If business is good, the enterprises may not only raise the amount to be retained but also exceed the originally proposed proportion to be retained. On the contrary, if business is not good, the enterprises may reduce the proportion to be retained. For instance, the Shiyi Jinglu Department Store precalculated that the proportion to be turned over to the state was 70 percent. The proportion of tax actually paid for the months of September, October, November and December was respectively 67.67 percent, 71.68 percent, 68.17 percent and 71.7 percent; Shiyi Jinglu Nonstaple Food Store precalculated that the proportion to be turned over to the state was 60 percent. The proportion of tax actually paid was approximately 55 percent. In this way they have changed more effectively the situation in which they ate out of a big pot and had a "guaranteed income come rain or shine."

Third, some units carry out the method of retaining base profits plus the dividing the part that is overfulfilled. Because the sales plan and the volume of profit quotas have much to do with the amount to be retained by the enterprises, endless arguments often occur when deciding the quotas for the plan. Because the quotas are often inappropriate, the profits retained by the enterprises are too high at one time and too low at another (it is more often that they keep the quotas very low so as to retain more profits for the enterprises). The carrying out of the principle of "five taxes and one charge" can prevent such a tendency, because the quotas for the plan do not have much effect on the profits to be retained by the enterprises.

Fourth, proportionate income tax is not easy to popularize, because each store or shop has its own tax rate. The principle of "five taxes and one charge" is easy to popularize, because the tax rate and cost rate are unified, except for the readjustment tax.

If viewed from the results, two types of stores responsible for their own profits and losses do not differ much on the whole. But one factor must be taken into consideration. The Shiyi Jinglu Department Store and Shiyi Jinglu Nonstaple Food Store which carry out the principle of "five taxes and one charge" have increased their business operations by a large margin due to the trial-implementation of the principle of profits retention in the fourth quarter of 1979. There was a further increase after the implementation of the principle of "five taxes and one charge" in 1980. Therefore the enhancement of the economic results is more outstanding, if we consider them altogether in unification. From September to December, 1980, the volume of sales and the volume of profits of the Shiyi Jinglu Department Store were up by 84.3 percent and 153.8 percent respectively in comparison with the corresponding period of 1978, and those of the Shiyi Jinglu Nonstaple Food Store were up by 23.7 percent and 48.3 percent respectively.

Of course, it is still necessary to further perfect the method of "five taxes and one charge." Some problems have still to be studied and solved in practice. For instance, there are great differences in the profit rates of different undertakings. Take the two trial-point undertakings of the department store and the nonstaple food store as an example. The nonstaple food store belongs to the undertaking of small profits. If it is required to pay income tax according to the unified tax rate, the profits retained by the enterprises will be very small. In addition, the store has to keep the rewards for the staff and workers at a certain level, so the amount of the development and welfare funds the enterprises can retain is very small. That is detrimental to the development of the store itself. Therefore, it is possible to consider the adoption of different tax rates for different undertakings. We should further study how to rationally analyze the subjective and objective reasons that cause the difference in revenue and to maintain the tax rate of the readjustment tax on the differential revenue so as to let the state take the greater part of the differential revenue that is not caused by subjective reasons, while maintaining the initiative of the staff and workers of the stores that have been doing well in their business.

On the basis of the method of "five taxes and one charge" that was implemented last year, the Tianjin Finance and Trade Commission will, beginning this year, change the method of collecting "house property and landed estate tax" into that of collecting the "cost for the use of fixed assets," which will be collected at a monthly rate of 3 per mill based on the original value of the enterprises' fixed assets provided by the state (including buildings, machinery and equipment). In addition, the proportionate income tax that was originally implemented in eight units will all be changed to the method of "four taxes and two charges."

IV

The trial points have just been carried out in a few units and the achievements are only preliminary. There are certain limitations to them. From the practice within these few months, we have learned the following points:

(1) The question of solving the form of the system of ownership of the retail trade includes the two tasks of developing the component part of the diversified economy and of perfecting the form of the system of ownership by the whole people.

The retail trade is an important link in the process of social reproduction. After social products are produced, they must go through circulation and enter the sphere of consumption so as to become objects of consumption. The retail trade is just a link that ultimately has decisive singificance in the circulation process of commodities. It not only takes on the circulation of the means of livelihood, but undertakes part of the means of production (this is especially so in the countryside). On the one hand, it links up with industrial and agricultural production through the wholesale trade. On the other hand, it directly serves the daily needs of the people. Doing a good job in the retail trade has important significance to meeting the demands of the people's livelihood, promoting the development of industrial and agricultural production, establishing close ties between the party and government and the people and to reflecting the superiority of the socialist system. Under the protracted influence of "leftist" ideology, the retail trade network was removed and merged in such a big way that the stores became bigger and bigger and the network became smaller and smaller. In this case, they were far from being able to meet the needs of the consumers. As they were overanxious about the reform of the ownership system, many cooperative shops were changed into state-run shops, while the rest were changed into large collectively-owned shops, which carried out the principle of unified responsibility for profits and losses. Individual small merchants and peddlers practically disappeared. In fact business was exclusively run by state-owned trade. In the management system, power was excessively centralized. The enterprises had no autonomy and carried out the principle of eating out of a big pot and of egalitarianism in allocation, which seriously hampered the initiative of the staff and workers of the enterprises. This gave rise to a situation in which the quality and attitude of service in the retail trade were bad, "bureaucratic style of work in business" was serious, management was in such a mess that there were loopholes, losses and waste and that the results of running business were bad. All this affected the character of the ownership system in socialist trade in such a way that it was hard for the retail trade to meet the needs of industrial and agricultural production and the people's livelihood. The masses had a lot of complaints about it. In readjusting the national economy, we should not only readjust the proportionate relations, appropriately increase the investment in and labor force of the retail trade and increase the network so as to adapt the scale of trade to production and consumption, but also solve the form of the ownership system in the retail trade so as to adapt the production relations to the level of the productive forces. We have to do it from two aspects. On the one hand, we should readjust the structure of the ownership system, energetically develop collective trade, and appropriately develop individual trade so as to make the component parts of a diversified economy coexist with each bringing into play its characteristics. On the other hand, we should investigate and study some appropriate specific forms in the state-run retail trade so as to bring into better play the initiative of the enterprises and the staff and workers, improve management and meet the needs of the masses in a better way. Therefore, we must fundamentally restructure the management system of stores or shops and carry out the principle of independent accounting, of the substitution of taxes for profits and of being responsible for one's own profits and losses. We must further get rid of the convention of unified income and expenses. This will give more impetus to encouraging the staff and workers in the commercial field to improve their management system and service.

(2) The principle of being responsible for one's own profits and losses carried out by the state-run stores is a principle of being responsible for one's own profits and losses in a relative sense. It is the consummation of the form of the system of ownership by the whole people. According to the objective requirements of the socialist commodity economy, each basic economic unit should have certain autonomy for its economic activities and become a relatively independent commodity producer which shoulders the relevant economic responsibilities. Take the concrete example of the retail trade, medium and small enterprises are in the majority, the places where they are located are separated from each other and there is a great variety of business and service items. They face large numbers of consumers, they should not adopt an accounting form of high centralization and of unified responsibility for profits and losses. The carrying out of the system of being responsible for one's own profits and losses is beneficial for bringing into better play the initiative of the staff and workers, to meet the immense variety of customers' demands. This is more suitable to the characteristics of the retail trade.

Viewed from the situation of the trail points, we know after the stores have carried out the system of responsibility for their own profits and losses, first, the ownership of the means of production still belongs to the state; second, although the right to use the means of production belongs to the stores, the stores still have to carry out business under state planning and within the limits permitted by policies and decrees, and they have to shoulder the relevant economic responsibilities. The stores cannot go beyond the range of business, nor have they the right to use the means of production for speculation and profiteering, for harming the people's interests or for seeking personal gain. In other words, the stores make use of the right under certain conditions. Third, the allocation of the income and profits of the stores is carried out under the principle of considering the interests of the state, the collective and the individual and in accordance with the rules and regulations concerned. From September to December 1980 the income of Shiyi Jinglu Department Store increased by 66,000 yuan over the corresponding period of the previous year. In all, 42,800 yuan, which was 64.8 percent of the increased amount, was turned over to the state. The income of Shiyi Jinglu Nonstaple Food Store increased by 17,300 yuan over the corresponding period of the previous year. In all 15,200 yuan, which was 87.6 percent of the increased amount, was turned over to the state. Except for the greater part of the enterprises' profits which were turned over to the state, the fixed assets and welfare institutions purchased with the enterprises' retained funds are still the property of the system of ownership by the whole people. From the various aspects mentioned above, we know that the trial-point stores carry out the system of responsibility for their own profits and losses under relative and certain limits. This system only changes the management system and form of allocation of the stores, making the production relations of the system of ownership by the whole people more perfect. It does not change the nature of the system of ownership by the whole people of the enterprises.

(3) We should further study how to realize macroeconomic targets while enlivening microeconomics.

The purpose of carrying out the system of responsibility for enterprises' own profits and losses and of perfecting the system of ownership by the whole people is to bring into play the initiative of the staff and workers of the enterprises, to enliven the economy, to promote production and to meet the needs of society. The facts obtained from the trial points show that realizing the target of meeting the needs of society is fundamentally identical with improving the way of running business and increasing profits. But there is a contradictory aspect between increasing the enterprises' profits and meeting the needs of society. Therefore, the enterprises have enlarged their autonomy in running business, and the income of the staff and workers is closely linked with profits. Under the condition of having greater motivation, how should we intensify the state's instructions to and control over the enterprises' economic activities to prevent the tendency of just concentrating on profits and of neglecting the need of society; how should we make the enterprises not only have powerful motivation but also keep on the right track; how should we make the enterprises' economic activities comply not only to the requirements of the law of value and of the law of material interests, but primarily to the requirements of the basic law of the socialist economy to differentiate them from capitalist trade which is intent on nothing but profits; these are problems which merit further study and solution.

In order to realize the above, the fundamental guarantee is to do a good job in readjustment, to stabilize macroeconomics, to have a rich supply of the means of livelihood, to make the trade network sufficient and to open up and unblock the circulation channels. In this way, speculation and profiteering, the forcing up of prices and the practice of concentrating on high profits will be restricted to a very great extent.

In order to carry out the above, we should make clear the enterprises' responsibilities and work out practicable, all-round checking and supervision methods, while expanding their autonomy. We should check not only on profit and other economic quotas, but also on how the principles of running business and policies are implemented, and on how service is improved so as to meet the needs of society. We should direct the initative of the staff and workers of the enterprises onto the right track.

Units at a higher level should exercise the necessary administration over the enterprises which carry out the system of responsibility for their own profits and losses. They should instruct and restrict these enterprises through economic levers such as prices, credit and taxation. Economic legislation, such as legislation on fixing prices and legislation on market management, should be intensified. Those who act against such legislation will be given economic and legal sanctions.

Trial points have just been carried out, many problems cannot be deeply studied and summed up in time. We will work out a comprehensive and complete system and methods through accumulation of experience in our practice in the future, so as to guarantee that the enterprises which carry out the system of responsibility for their own profits and losses can advance along the correct road of serving the people.

CSO: 4006/477

'JINGJI YANJIU' ON SUPERIORITY OF SOCIALISM

HK311313 Beijing JINGJI YANJIU [ECONOMIC RESEARCH] in Chinese No 7, 20 Jul 81 pp 34-39

[Article by Zhou Zhenhua [0719 2128 5478] of the Scientific Socialism Research Institute of the Sichuan Provincial Academy of Social Sciences: "Several Questions Concerning the Superiority of the Socialist Economic System"]

[Text] The "resolution on certain questions in the history of our party since the founding of the People's Republic of China" passed by the 6th Plenary Session of the 11th Party Central Committee Party incisively summed up the positive and negative historical experiences over the 32 years since the founding of the People's Republic, systematically expounded on the superiority of our socialist economic system and explicitly set forth the historical mission of further bringing into play the superiority of the socialist system and gradually building our country into a modern, highly democratic and highly civilized great power. We must seriously study and firmly implement these documents, bolster our confidence, heighten our spirit, more closely unite around the Party Central Committee, act with one heart and one mind and advance in victory along the party's line laid down since the 3d Plenary Session of the 11th Party Central Committee.

This article intends to present the author's insights and some tentative views after studying these documents, focusing on the following question: What are the major manifestations of the superiority of the socialist economic system? Why is it that some aspects of this superiority were not fully brought into play in our country during certain periods? What are the ways by which the superiority of the socialist economic system can be more fully brought into play?

(I)

Marx' and Engels' theory on the superiority of a socialist economic system is based on scientific knowledge of the objective law of development of human society. It was formulated by contrasting the socialist system with the basic contradictions and decadence of the capitalist system.

Marx and Engels pointed out that the basic law of development of human society is that production relations must be compatible with the nature of the productive force and that socialized mass production and class contradictions under the capitalist system will certainly lead to the dictatorship of the proletariat and the replacement of the capitalist economic system by the socialist economic system. While exposing the decadence of the capitalist economic system, they also expounded on the superiority of the socialist economic system. They pointed out that under the capitalist system, the process of production is highly socialized while the means of production is concentrated in the hands of a small number of capitalists, and the goal of production is to exploit the surplus value created by the proletariat. On the other hand, the socialist economic system achieves public ownership of the means of production on the basis of socialized mass production and eradicates the phenomenon of man exploiting other human beings. This is "the only precondition for the constant and rapid development of the productive force." The goal of developing production is to "ensure that all members of society can enjoy a prosperous and ever richer material life and that they can fully and freely develop their physical prowess and intelligence." ("Anti-Duhring," "Selected Works of Marx and Engels," Vol 3, p 322) Under the capitalist system, the capitalists engage in unbridled competition on the basis of the system of private ownership of property periodic economic crises caused by the anarchic state of production bring about serious disruption to the productive force. Under the socialist economic system, "the anarchic state of social production gives way to socialized and planned regulation of production according to the needs of the whole society and each individual member." The people "become the masters of their own social association" and "create their own history with full consciousness." (Ibid, pp 319, 323) Under the capitalist system, "those...who work acquire nothing, and those who acquire anything, do not work." ("Selected Works of Marx and Engels," "The Communist Manifesto," Vol 1, p 267) Under the socialist economic system, "the individual producer receives back from society--after the deductions have been made--exactly what he gives to it. What he has given to it is his individual quantum of labor." "He draws from the social stock of the means of consumption as much as the same amount of labor he contribures costs." ("Selected Works of Marx and Engels," "Critique of the Gotha Program," Vol 3, pp 10-11) Under the capitalist system, the bourgeoisie ruthlessly oppresses and enslaves the working people; the socialist system "raises the proletariat to the position of the ruling class, to win the battle of democracy." Under this system, "the free development of each is the condition for the free development of all." ("Selected Works of Marx and Engles," "The Communist Manifesto," Vol 1, pp 272-273)

From the above discussion, the superiority of the socialist system which Marx and Engels expounded on is mainly manifested in the following three aspects: Economically, it realizes the public ownership of the means of production, and the regulation by planning and distribution according to work, enables the productive force to develop constantly and rapidly and make it possible for the people to enjoy a prosperous and increasingly better material life. Politically, it fully brings people's democracy into play and enables the people to become the real masters of society. Culturally, it enables full and free development and utilization of the people's physical prowess and intelligence. It is precisely because the socialist system possesses superiority in many aspects that it will ultimately overcome the capitalist system.

(II)

For the socialist economic system to fully manifest its superiority over the capitalist economic system, it has to undergo a long and tortuous historical process.

What is the criterion in determining whether a new social economic system is better than an old social economic system? Basically, we have to see within a very long historical period whether the production relations in this society are more compatible with the nature and level of development of the productive force than in the old society, whether they can better mobilize the workers' enthusiasm and whether they can rationally utilize the means of production to realize the development of the productive force faster and on a larger scale than in the old society. We must not take specific phenomena during a specific period, in a specific country or in a specific area as the criterion for judging whether a social economic system is superior or not. Otherwise, we will be confused by superficial phenomena and will not be able to see the true nature of matters with clarity.

Stalin said: "It took the feudal economic system around 200 years to prove its superiority over the economic system of the slave society...and the bourgeois economic system 100 years or less to prove its superiority over the feudal economic system." (Stalin: "On the Opposition," People's Publishing House 1963 edition, p 405) This is because all newborn social economic systems develop along a tortuous path. As the old social economic system approaches the brink of destruction, because of the old ruling class' rich experience in reactionary rule, it will try to enforce certain partial reforms and patch up its errors in order to prolong the measured days of the old economic system. At times, a sudden "spurt of vitality" might even occur prior to final collapse. On the other hand, when a new social economic system is born, because the new production relations and superstructure have not fully matured, it is still imperfect and has various shortcomings and errors, and because the new ruling class lacks leadership experience, various kinds of errors are inevitable and sometimes, even great setbacks and retrogressions occur. Nevertheless, as the basic economic system of the old society is incompatible with the nature of the productive force, even if some of its specific structures are almost perfect, it will still be unable to resolve this inherent contradiction and its advance toward destruction is inevitable. As for the new society, although its specific structures have not fully matured and have imperfections, because its basic economic system is cimpatible with the need to further develop the productive force and with the basic interests of the broad masses of people and because it represents the direction of historical progress, it will be able to overcome the shortcomings and errors of its specific structures and constantly improve and develop itself in the course of advance, ultimately overcoming the old social economic system and bringing human society onto a new and higher state.

Marx' and Engels' exposition on the superiority of the socialist economic system was formulated accordingto the conditions prevailing during the 19th century and on the assumption that the proletarian socialist revolution would first triumph in developed capitalist countries such as Britain, the United States, France and Germany. Great machines and industries had been built in these countries; the productive force was highly developed; the proletariat constituted the majority or a significant portion of the population; the people's scientific and cultural level was relatively high, and they had a long tradition of democratic political life. Marx and Engels thought that after the proletariat in these countries seized political power, expropriated the capitalists and reformed the small producers, the superiority of the socialist economic system would be significantly manifested in a relatively short period of time.

However, history traveled along a tortuous path. After Marx and Engels died, two events in historical development which they had not anticipated occurred: One was at the end of the 19th century and the other some time after the mid-20th century. Two industrial revolutions occurred in the capitalist world and production techniques advanced from the steam engine era to the electrical power era and from the electrical power era to the era of atomic power; while economically, the capitalist world advanced from free capitalism to the stage of monopoly capitalism and from monopoly capitalism to the stage of state monopoly capitalism. Thus, although there has been no qualitative change in the basic capitalist economic system--the system of private ownership of the means of production and the exploitation of the surplus value created by the proletariat--great changes have occurred in many specific structures of the capitalist economy. Essentially, this is a system wherein "the bourgeoisie has progressively come to consider the productive force as a social productive force within all the possible limits of capitalist production relations" in order to continue the development of the productive force in capitalist countries and the improvement of the people's livelihood. ("Selected Works of Marx and Engels," "Anti-Duhring," Vol 3, p 317) Another event was that the socialist revolution had not been able to win simultaneous victory in the developed capitalist countries but first achieved victory in countries where the productive force was underdeveloped. The October revolution achieved victory in Russia where capitalism was at an intermediate stage of development while after the Second World War, the revolution achieved victory in China where the productive force was backward and also in other backward countries. In these countries, manual labor was still predominant; productivity was low; peasants and small producers constituted an overwhelming majority of the population; culture and science were backward, and there had been a long tradition of feudalism. After the proletariat seized power in these countries, they still had to conduct socialist reform of the bourgeoisie and the small producers and develop socialized mass production. Thus, it would take some time for the superiority of the socialist economic system as perceived by Marx and Engels to be fully manifested.

Therefore, our understanding of the superiority of the socialist economic system is not only based on the relvant expositions of the classical writers of Marxism. We must also start from reality and engage in concrete analysis of concrete problems. We must not see things only from a short-term perspective but also from a long-term perspective. We must not only look at the total production output and living standard of specific countries and areas but must also see whether the production relations (economic system) is basically compatible with the nature of the productive force and whether the political system and other parts of the superstructure can push forward the formation of the new economic base and promote the development of the productive force. In short, we must adopt the viewpoint and methodology of dialectical materialism in understanding the superiority of the socialist economic system and must not be confused by certain superficial phenomena.

(III)

Our socialist economic system was built and developed from the ruins of a semicolonial and semifeudal society where in the productive force was very backward. To fully demonstrate the superiority of our national economy in comparison with the national economy of capitalist countries will all the more require a long and tortuous historical process. This is a complex and arduous process.

The establishment and development of the socialist economic system in China was the inevitable outcome of our historical development. It was a decisive choice made by hundreds of millions of our people in the long process of struggle. Old China was a semicolonial and semifeudal society. Over more than 100 years, many progressive people took the old road of European, American or Japanese capitalist modernization in their effort to break away from the backwardness of the economy and technology. However, they all failed. The only road could be transition to socialism from new democracy under the leadership of the CCP and the establishment of a modern socialist power where man does not exploit other human beings.

The history of the People's Republic of China over the past 30 years or so is a history of great victories in socialist revolution and socialist construction. We have established the socialist state system wherein the people are masters under the leadership of the proletariat. We have established a socialist economic system consisting of state ownership and collective ownership. We have also established an independent and relatively complete industrial and national economic system and laid the initial foundation for the realization of modernization.

Practice in the past 32 years has initially proved the superiority of our socialist economic system. Although the development of our national economy experienced several complications, we were still able to attain achievements which would have been impossible in old China. From 1950 to 1977, total industrial output in our country grew by an annual rate of 13.5 percent. During the same period, the industrial growth rates in some capitalist countries were as follows: 4.5 percent for the United States, 12.4 percent for Japan, 6.9 percent for West Germany, 2.3 percent for Great Britain and 5.2 percent for France. Our total agricultural output increased by an annual average of 4.2 percent. During this period, agricultural growth rates in some capitalist countries were: 1.9 percent for the United States, 2.7 percent for Japan, 1.8 percent for West Germany and 2.2 percent for both Great Britain and France. Relying on our own resources, we established a series of new industrial and communications sectors and scientific and technological departments, succeeded in testing the atomic bomb, the hydrogen bomb and the ICBM and launching and retrieving artificial earth satellites. The material and cultural life of the great masses of our people has considerably improved compared with the period before liberation. This fully shows that our socialist economic system--public ownership of the means of production, regulation by planning and distribution according to work--has great vitality. It is indubitable that we can rely on the superiority of the socialist economic system to achieve the four modernizations. All views which negate the superiority of the socialist economic system are erroneous.

However, we must also see that at the present stage, many shortcomings and weak points still exist in specific structures of our socialist economic system. The major faults are: Too much rigidity in the system of economic management, over-centralization in the system of planning, egalitarianism in the wage system and others. The existence of these faults also seriously impedes the full manifestation of the superiority of the socialist economic system.

In short, we must take the viewpoint of dividing one into two in understanding the socialist economic systems established by countries whose productive force is underdeveloped. First, we must fully affirm that their basic system--public ownership of the means of production, regulation by planning and distribution according to work--is essentially compatible with the socialized productive force, and thus, the socialist economic system possesses great vitality. At the same time, we must be sober-minded and see that shortcomings and faults still exist in specific structures in this system and that they are incompatible with the growth of the productive force and hinder the full realization of the inherent superiority of the socialist economic system. The main reason why these shortcomings and faults exist is that without regard to the conditions prevailing in our country, we arbitrarily designated the superiority which Marx and Engels mentioned and which can only be realized in a developed and mature socialist society as a goal which can be attained in our country at the present stage. We committed leftist errors in the guiding principles of economic construction.

(IV)

The basic way to fully realize the superiority of our socialist economic system is to actively and steadily engage in economic readjustment and economic reform in accordance with the requirements of the development of the productive force.

In human history, all social economic forms had to constantly enforce readjustment and reform of their specific structures on the basis of their fundamental economic system. Compared with the qualitative change of developing from one social economic system to another--a "leap"--this readjustment and reform of specific economic structures is but a quantitative change or partial qualitative change, but it is nonetheless an indispensable link in the process of development of production. We must be good at distinguishing between the basic system of a social economic form and its specific structures. The incompatibility of the basic system with the productive force can only be resolved through a social revolution or by eliminating the old production relations. This is a stage when the contradiction between production relations and the productive force is in a stage of significant flux and a state of dundamental change wherein one social economic form replaces another, such as the socialist system replacing the capitalist system. Once a new social economic form has been established, its basic system is relatively stable and will not undergo fundamental qualitative change within a whole historical period. However, the productive force is the most revolutionary and most active element in social production. Many aspects of specific structures will become incompatible with the development of the productive force. This incompatibility between specific structures and the productive force can be resolved in time by enforcing partial readjustment and reform while maintaining the basic system of the social economic form. This is the "evolutionary process" in the historical development of society. It is a stage when the contradiction between production relations and the productive force is in a state of quantitative change or partial qualitative change. It is definitely not the negation of the basic economic system but an effort to improve it and make the basic economic system more sophisticated.

The socialist economic system is a new economic system in human history and one that is more advanced than capitalism. Its birth, development and change will take several hundred years and there will certainly be different stages of growth. In the entire historical process of socialist society, the basic economic system--public ownership of the means of production, regulation by planning and distribution according to work--will not undergo any fundamental change. However, specific economic structures will undergo changes at every stage of its growth. Partial readjustment and reform must be undertaken to cope with the requirement of the development of the productive force. If people can undertake readjustment and reform of specific structures in the socialist economy, the inherent superiority of the socialist economic system will be better brought into play.

Public ownership of the means of production is the cornerstone of a socialist economic system. Our determination to maintain socialist public ownership does not mean that we believe that the higher the level of public ownership the better, without considering the actual conditions of the productive force. It means the establishment of a system of ownership which is suited to the state of the productive force in our country at the present stage, bv observing the law that production relations must be compatible with the nature of the productive force. We have a population of 1 billion, 800 million of whom are peasants; we have a vast territory but little arable land; our economic foundation is weak; manual labor still predominates; the commodity economy is backward; the level of socialization of production is low and the development of the productive force is very unbalanced. Under such conditions, we can only establish a system of ownership consisting of diversified economic elements and coexisting forms of diversified modes of production with the socialist state economy and collective economy as its main body and state capitalist economy under the guidance of state plans and individual economy as its complement. Only thus can we fully make use of the abundant manpower and material resources in our country to create more material and spiritual wealth in order to satisfy the growing material and cultural needs of the whole society.

A socialist state-owned economy is the leading strength in our national economy. To make the specific structures in the socialist state ownership system compatible with the state of the productive force at the present stage, we must steadily enforce comprehensive reform of the economic management system. Through expanding the decisionmaking power of enterprises, we must set up the system of "substituting taxes for profits, independent accounting and responsibility for one's own profits and losses" in order to transform the enterprises from being attachments of administrative organs at various levels into relatively independent commodity producers under the guidance of state plans which are able to flexibly conduct productive activities in accordance with social needs and which are able to closely relate production results with the material interests of the enterprise and the workers. On the basis of expanding the decisionmaking power of enterprises, we must change unilateral reliance on regulation by planning into combining regulation by planning mechanism with regulation by market mechanism. Economic management must move from mainly relying on administrative organization and measures to relying on economic organization and measures. We must remold enterprises which are "big and complete" or "small but complete" into integrated economic entities which are organized according to the principles of specialization and coordination and economic rationalization. These measures must be taken to make our economic management system and operation and management methods compatible with the requirements of building the four modernizations and to promote the continuous and steady growth of our productive force.

The improvement of the system of ownership and the reform of the economic management system are closely related and complementary to the readjustment of the structure of the national economy. Under the present conditions of irrational structure of the national economy and serious disequilibrium in the proportional relationships, readjusting the national economy is the foremost task. All efforts to improve the system of ownership and to reform the economic management system must be subordinated to readjustment, must serve readjustment and must be smoothly conducted in a way beneficial to readjustment. Some measures which ought to be taken from the long-term point of view but which conflict with present readjustment work must be postponed. Measures which are also beneficial to the readjustment work must be continued. In order to solve the problem of disequilibrium in the national economy once and for all, the ownership system must be improved and the economic management system must be reformed. Only by maintaining the absolute primacy of socialist public ownership while enforcing various types of responsibility systems and appropriately expanding private plots in the rural areas, permitting the existence of individual economy and vigorously developing collective ownership in the urban areas and adopting state capitalist economy by engaging in joint ventures with foreign capital can we enliven the economy, increase income, increase accumulation, overcome financial and economic difficulties and develop the weak links in the national economy. By the same token, it is only by seriously reforming the economic management system which is characterized by a high degree of centralization, unified control of income and expenditure and state monopoly of purchase and marketing can we fully mobilize the enthusiasm of central departments, local administration at various levels, enterprises and producers, do a good job in combining the strengthening of macroeconomic guidance by state plans and the enlivening of microeconomic enterprises and greatly improve the economic results of production and construction, to enable the socialist economy to develop rapidly.

In short, the errors and setbacks in our economic construction and economic work were not brought about by the basic economic system of socialism but were caused by the shortcomings and faults of specific structures in the socialist economy. Our country has not yet been engaged in socialist construction for a long time. We are clear about certain laws of development of the socialist economy, while with regard to many others, we have to undertake further research. It is inevitable that in the process of building modernization in a vast socialist country like ours with a population of 1 billion, 800 million of whom are peasants and a backward economy that some errors appear in our work and some shortcomings exist in the specific structures of the socialist economy. The reason why we are rectifying the leftist errors in economic construction and enforcing a series of economic readjustments and reforms is definitely not to change the basic system of our socialist economy but to overcome the shortcomings and faults in specific structures, avoid repeating past setbacks and mistakes and gradually enable the inherent great superiority of the basic system of socialist economy to be fully brought into play. Therefore, those views which hold that readjustment and reform are "rightist" and "revisionist" are erroneous. Those who think that readjustment and reform mean adopting the methods of capitalist economy and abandoning the basic system of socialist economy are even more mistaken.

Engels said: "The best way to clearly understand t[illegible] is to learn from one's own mistakes and painful experiences." ("Selected [illegible] of Marx and Engels," "To Mrs F. Kelley-Wisch-Newetzky (28 December 1886, [illegible]ol 4, p 458) Since the 3d Plenary Session of the 11th Party Central Committee, the Party Central Committee has seriously rectified leftist errors and gradually established a road to modernization which is suited to conditions in our country. Although this has to be constantly developed, enriched and improved in the process of practice, the important points have been summed up and have been confirmed in the "resolution on certain questions in the history of our party since the founding of the People's Republic of China," which was adopted during the 6th Plenary Session of the Party Central Committee. This is an important guarantee for the further demonstration of the superiortiy of the socialist economic system and the achievement of the victory of building the four modernizations.

Under the leadership of the Party Central Committee, we must consciously implement the party's line since the 3d Plenary Session of the Party Central Committee, firmly march forward along the road of socialism and struggle hard to build a highly democratic, highly civilized and great modern socialist power.

CSO: 4006/477

ENERGY

1980 POWER INDUSTRY ENERGY CONSERVATION RESULTS, NEW TASKS SURVEYED

Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 6, 5 Jun 81 pp 1-2

[Article by editorial staff: "Strive to Decrease Energy Consumption in Electric Power Industry"]

[Text] In 1980, staff and workers on the electric power production front engaged in energy conservation work, achieving rather good results. The nation's fossil-fired power plants with capacities of over 6,000 kW achieved a fuel consumption rate of 448 g/kWh lower than in the previous year, which resulted in a saving of 2.9 million tons of raw coal. Actual line losses in the power grid were decreased to 8.93 percent, a figure 820 million kWh lower than in the previous year and equivalent to a saving of 450,000 tons of raw coal. By rational water use, large and medium size hydroelectric stations generated an additional 1.6 billion kWh of electricity, equivalent to 960,000 tons of raw coal. Fuel oil consumption in fossil-fired plants was decreased by 580,000 tons from the previous year, equivalent to 1.1 million tons of raw coal. With the exception of the saving on oil, which resulted from the change in consumption structure embodied in the state energy policy of converting oil-fired turbines to coal and which thus cannot be counted as conservation (although it does include the conservation of ignition oil in some fossil-fired plants), the conservation results for last year were equivalent to a saving of 4.31 million tons of raw coal nationwide, or about 3.5 percent of the total amount of coal used nationwide for generating electricity and providing heat through the heating network. This must be called a considerable conservation achievement.

Analyzing the various energy conservation measures, it becomes clear that the greatest conservation effect was achieved by decreasing coal consumption in electric power production nationwide, and that increased use of high-temperature, high-pressure generating units played the main role in this saving. Because high-temperature, high-pressure units can decrease coal consumption by about 160 g/kWh as compared with low-pressure equipment, economic load scheduling throughout the nation's electric power system last year increased the amount of energy generated with high-pressure units (not including high-pressure block capacities first commissioned during the year) by more than 10 billion kWh over the previous year; this factor alone accounted for 80 percent of the total saving of raw coal in fossil-fired electrical power production. The next most important factor was the relatively long high-water season and abundant water, as a result of which the electric power systems were able to practice rational load scheduling and produce more electricity. Last year, national power production was up 8.3 billion kWh, and a mere 26 large and medium reserviors not only yielded more than 4 billion kWh of additioanl hydroelectric power, but also stored an extra 11.4 billion cubic meters of water. The restoration of water levels in the reservoirs laid an excellent foundation for thorough, rational utilization of hydroelectric resources this year. As a result, we should make even better use of the potential represented by high-pressure generating units and hydroelectric power generation to achieve even better conservation results.

Energy conservation is an undertaking in which the masses should participate. Experience shows that if all power industry employees had not striven to utilize latent potential and had not done everything possible to save the energy contained in coal, electricity, oil,water and steam, it would have been impossible to accumulate such great conservation results. According to summary data on large-scale repair of fossil-fired electric power units in 1980, more than 1,400 turbines and boilers were given major overhauls nationwide, while in coordination with these overhauls, various types of measures were taken to improve technology in order to increase safety and save on energy. Plastic ball cleaning apparatus was installed on the condensers of more than 40 units, making possible an increase of about 2 percent in the vacuum in the units; more than 200 blowers and 300 water pumps were modernized, generally resulting in a saving of 1 to 2 percent on electricity use by the plants themselves; the overhauls of turbine and boiler equipment eliminated leakage and failures; and some of the equipment was subjected to thermal efficiency testing, resulting in improvement of efficiency everywhere.

In order to give a clear idea of the latent potential for energy conservation, we now present some examples of conservation results.

As a result of overhaul and modernization of two 300,000 kW units at the Wangting power station, the period of safe operation was further increased, and in particular after a high-pressure heater was put into operation in one of the units, the output of that unit reached essentially the rated value, the feedwater temperature was increased from 160° to 260°C, and the unit's heat consumption fell from 2,213 to 2,158 kcal/kWh, resulting in a decrease of 10 g/kWh in coal consumption which made it possible to save more than 400 tons of standard coal a day. It can be seen from this example that installing high-pressure heaters is very important in fuel conservation.

Because of limitations in the original set of equipment of a 75,000 kW generator unit at the Jinan power plant, for a long time the power output was 50,000 kW and the turbine steam consumption rate was about 3.5 percent above the guaranteed factory figure, while the turbine efficiency was about 2 to 3 percent below the design figure, so that this unit had the highest coal consumption in the plant. In order to save fuel, the power plant took the occasion of a major overhaul to readjust the set of equipment, decrease the number of nozzles, decrease the flow surface in all stages, eliminated vacuum system leakage, repaired gaps in the axle seals, improved the tightness of the rotary air preheater and the like, with the result that the turbine's heat consumption decreased by 130 kcal/kWh, the turbine efficiency was increased by 2 percent and the fuel consumption for the unit fell by 25 g/kWh, so that this unit, which originally had had the lowest efficiency, suddenly became the most efficient unit, yielding a saving of more than 200 tons of standard coal a day. In fact, in the past many power plants practiced "above-rating" operation on a large scale, increasing the nozzle area in the diaphragm, which resulted in great steam losses; an analysis by the Northeast Electric Power Technology Improvement Office indicates that simply by returning to the initial flow area certain plants in the northeast could save about 10,000 tons of standard coal per year.

The Baiyang River electric power plant put an unused small 1,500 kW steam turbine into use and converted a DG-270 electric feedwater pump into a gas-powered pump; the increase in gas consumption resulted in an increased coal consumption of 1.5 g/kWh, but a decrease in the plant's electric power consumption resulted in a drop of 2 g/kWh in the coal consumed in energy production. As a result of improvements, the plant can produce more than 20,000 additional kilowatt-hours of electricity a day and can save about 0.5 tons of standard coal. Recently after the Minhang power station began using a hydraulically-coupled speed-adjusted water pump developed by the Shanghai General Electrical Power Equipment Repair and Manufacturing Plant, long-term operating tests showed that it functioned stably and reliably and provided excellent regulation and outstanding energy conservation results, being capable of saving 11,200 kWh of in-plant consumption,equivalent to 4 tons of standard coal, every year as compared with the earlier electrically powered water pump. Recently, in order to increase the superheated steam temperature in the 670 ton/hr boiler of a 200,000 kW unit, the Jingxi power plant conducted tests and made improvements, then put a flue gas recycling unit back into operation, increasing the reheated steam temperature by 20-30° and decreasing the unit's coal consumption by about 2.5 g/kWh, thereby eliminating electricity consumption by the recycling blower and higher coal consumption resulting from decreased boiler efficiency. Coal consumption for the entire unit was decreased by 1.4 g/kWh, making it possible to save about 1,500 tons of standard coal a year. It can be seen from the circumstances described that provided the masses can be thoroughly mobilized and analysis of energy consumption intensified, there is great potential for energy conservation.

After a 25,000 kW condenser-type generator unit was converted to bled steam heat supply and power generation at the Shenyang power plant, the plant began central supply of heat to 14 nearby industrial enterprises, putting an end to the use of 45 small boilers owned by the enterprises and 30 smoke stacks, thereby not only lessening pollution of the city's environment, but decreasing flyash discharge by 9,000 tons a year and making possible a saving of 40,000 tons of standard coal in comparison with decentralized heat supply. Recently the plant has been adding a new heat supply unit which when completed will provide all the steam required by 22 plants and will provide heat to an area of 2.4 million square meters at a steam supply rate of 300 tons per hour, thus resulting in the closing down of more than 100 small boilers and a decrease of 60 smokestacks (it will be possible to decrease the amount of coal consumed in power production from 500 g/kWh and to save 100,000 tons of fuel oil which the enterprises would have used in their own boilers, as well as 100,000 tons of coal used for heating in the winter. The conservation results from centralized heat supply are striking, and industrial cities with a long heating period in the winter should pursue this approach especially actively, in combination with modernization and conversion of medium and low power units.

Following the approach of attaching importance to even small quantities in energy conservation, the various electrical systems have carried out general surveys, and the East China power system has adopted a three-level management approach to grid losses, and has actively pursued an energy conservation criticism movement; by loss accounting at every level in the electrical supply lines and by conducting a general survey, last year it recovered 3.6 million kWh of electrical energy that would have been lost. By striving to utilize reactive power, adding power capacitors, adjusting transformer connections and the like, this system recovered a total of 600,000 kvar of reactive power, assuring that the average voltage at the network monitoring points would meet standards during peak load, and thus making possible a saving of 100 million kWh. Line losses in the northeastern grid dropped by 0.61 percent, resulting in a saving of 180 million kWh.

Although the power industry had great achievements in conversation during 1980, its technical and economic indicators still fall far short of those in the developed industrial countries, and we must acknowledge that much latent potential still remains. As regards the energy consumption levels of the country's power industry, if the coal consumed in power production could be decreased by 1 percent from the current level (i.e. by 4.5 g/kWh), it would be possible to save 1.35 million tons of raw coal a year; if the line loss rate in the power grid could be dropped by 1 percent (in absolute terms) from its current level, it would be possible to save 3 billion kWh on power losses. Accordingly, we must work out an overall energy conservation plan which is based on the specific circumstances of our country's power industry and must strive to quickly attain or approach the power consumption figures for power production units of the same type in industrially developed countries, thereby making the requisite contribution to modernization of our country's power industry.

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CSO: 4006/375

ENERGY

EAST CHINA POWER OFFICE REPORTS 1980 CONSERVATION RESULTS, SETS 1981 TASKS

Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 6, 5 Jun 81 pp 3-8

[Article by East China Power Industry Management Office: "A Summary of Energy Conservation During 1980 and Organization of Conservation Work for 1981"]

[Text] I. The power plants subordinate to our office had an annual power output 6.7 percent higher than in 1979; the coal consumption rate was down by 11 g/kWh from the 1979 figure, resulting in a saving of 453,000 tons of standard coal; in-plant power consumption was down by 0,15 percent from 1979, a saving of 66.32 million kWh. The extra electricity generated and fed into the grid as a result of the savings of raw coal and in-plant power consumption totaled 1.225 billion kWh, and this, together with increased generation of hydroelectric power, met the requirement for added electrical power generation from industrial uses in 1980 and fulfilled the assignment to "realize increased output through conservation." The line loss rate throughout the grid in 1980 was down by 1.12 percent from 1979 (absolute value), and the saving was 479 million kWh.

At the beginning of 1980, this office conducted an "Increase Output, Conserve, Increase Revenues, Decrease Expenditures" movement focused on conservation, and implemented conservation directives and specific measures down to the level of individual plants, shops (or shifts), teams and individual workers. The specific work done during the year was as follows:

A. Incremental-cost Load Scheduling Throughout the Grid, Increased Hydroelectric Power Production, a Larger Percentage of Power Production by High-Pressure Units

At the beginning of 1980, in the process of economic load scheduling between hydroelectric and fossil-fueled generating plants we had to bring the water level in the Xin'an River Reservoir, which had been regulated for many years, to a normal level so as to decrease the water consumption rate; in addition, we had to quickly master the water situation at the Fuchun River generating plant, which uses runoff, so as to minimize water losses. Objectively, rainfall was rather concentrated in 1980, and this in addition to economic load scheduling between hydroelectric and fossil-fueled generation resulted in a larger hydroelectric power output than in 1979, equivalent to a saving of 700,000 tons of standard coal (not included in the coal conservation figures given above). At the Xin'an River Reservoir the stress was laid on storing water, and a record water level 14.64 meters above the 1979 maximum was achieved, resulting in a decrease in water consumption from 6.39 to 5.4 m^3/kWh; the water utilization rate at the Fuchun River generating plant's reservoir reached 100 percent, and power output increased by 390 million kWh over 1979.

In the first quarter, the fossil-fueled plants under this office began economic load scheduling on the basis of incremental coal consumption rates in the main units, and in March the number of plants using incremental-cost and economic load scheduling was increased from 7 to 11, in addition to which computers began to be used to produce daily nonreactive load curves for these 11 generating plants on the basis of incremental coal consumption rates, which were issued to the plants for implementation, resulting in a saving of more than 80,000 tons of standard coal over the year. Starting in March, the Yangshupu, Zhabei, Minhang and Wangting fossil-fueled plants under this office began to close down their medium and low pressure boilers promptly in periods of low demand, starting them again in the morning; the number of boilers stoppages and restarts in 1980 reached 4,375. Medium and low pressure units generated 1.25 billion kWh less electricity than in 1979, and this, in addition to the commissioning of a new high-pressure units and a decrease in the number of temporary repairs on large units, resulted in an increase of 2.2 billion kWh generated by high-pressure units, thus increasing the share of electricity generated by the high-pressure units and saving an estimated 189,000 tons of standard coal. In order to increase the power output of its Jianbi, Nanre and Xuzhou main plants, the Jiangsu Province Electric Power Office ceased power production at its 34,000 kW high-coal-consumption railroad power station and completely shut down small units, with capacities of 8,000 kW or less, at the Taizhou, Quanhu and Xuyi power plants. The Gaochun and Huaiyin plants were either shut down completely or operated in only two shifts and shut down at night, with the result that the percentage of electricity produced by high-pressure units province-wide increased to 76.4 percent from the 1979 figure of 72.4 percent, yielding a saving of 71,000 tons of standard coal.

In addition, in order to make full use of the excess capacity of the high-efficiency heat supply unit at the Jinshan Petrochemical Combine's heat and power plant, this office concluded an agreement with the plant which was beneficial to both sides. In 1980 our office shut down low-efficiency, medium-pressure units in the system and had the petrochemical plant's power station generate power in their place; it provided 191 million kWh, saving 300,000 tons of standard coal for the country.

B. Implementation of State Energy Policy and Energetic Reduction of the Burning of Oil

In 1980 this office's actual oil combustion figure was over 4.1 million tons, a decrease of more than 290,000 tons from 1979 because of the Zhenhai power plant's newly-commissioned 125,000 kW oil-burning unit, in 1980 the Zhejiang provincial office had an increase in oil consumption amounting to 168,000 tons compared with 1979; the Jiangsu provincial office decreased oil consumption by 77,100 tons, and Shanghai's subordinate power plants decreased oil consumption by 383,000 tons). The main measure adopted was that starting in the fourth quarter of 1979, the Yangchang, Xiaguan and Minhang power plants gradually converted four oil-fired boilers which consumed a total of 580 tons per hour to coal. The Yangchang and Minhang plants built and commissioned two new coal-fired boiler units with a total consumption of 620 tons per hour; during the period when hydroelectric power production was up, medium and low pressure oil-fired boilers were shut down whenever feasible or used as little as possible; during the "exclusively fossil-fired load scheduling peak," the output of the 125 kW oil-fired unit was cut down at night to 60-80 kW, and the output of the 300,000 kW oil-fired units was cut down to 220,000 kW. As a result, the percentage of power generated by coal in the plants subordinate to this office increased to 37.4 percent in 1980, an increase of 2.7 percent over 1979, and oil combustion was decreased by more than 380,000 tons. In addition, in order to consolidate their coal burning, the Wangting, Xiaguan, Jianbi and Wujing power plants worked hard to decrease auxiliary fuel oil consumption. For example, in connection with major and minor repairs, combustion belts were installed in the boilers of the medium and low pressure stations at the Wangting power plant, the combustion nozzles were adjusted, the chemical testing and analysis of coal, coal classification and combustion regulation were strengthened and the like, so that the burning of oil was gradually stopped; by the end of the year the medium-pressure stations were burning exclusively coal, with the result that oil consumption was decreased by 38,000 tons from 1979. By regulating combustion, the Xiaguan and Jianbi power plants decreased the amount of auxiliary fuel used. The Xiaguan station also took advantage of the low nighttime demand to cut back on or stop the oil-burning boilers, with the result that the two plants decreased their oil consumption by 35,000 and 41,000 tons respectively.

C. Energetic Improvement of Large Generating Units to Achieve Stable, Full-Capacity Generation

The East China power network's existing intermediate-reheat units account for about 45 percent of the total fossil-fueled capacity in the grid. Stable, full-capacity generation in these units is of great importance for the entire grid, and accordingly we have consistently focused our efforts on them.

Recently the Wangting station's 300 kW unit underwent improvements and major and minor overhauls, which fundamentally solved such problems as blade breakage in the steam turbines, vane breakage in the draft fans, axle vibration, generator vibration, breakage of steam regulator valve rods, feedwater pump vibration, water leakage around the generator rotor, breakage of wires, boiler tube overheating and the like. In 1980, the plant installed a high-pressure heater of its own manufacture on a 300,000 kW unit, bringing the output back to 300,000 kW from 280,000 kW and decreasing coal consumption by more than 10 g/kWh/ The 300,000 kW unit's average operating time for the year was fully 7,691 hours.

Since November 1979, the overhaul contract system has been tested on two 125,000 kW units, the Zhabei power station's unit No 16 and the Minhang power station's unit No 8. Various improvements and problem elimination work were undertaken on these two units during major overhaul, as a result of which their quality was greatly improved and they set records of 208 and 184 days respectively of continuous operation without temporary running repairs. At the same time, our office organized competitions, exchange of experience, and comparative assessment for all of the 125,000 kW units in the power system; seven units were rated outstanding in the first half of 1980. The competition and comparative evaluation stimulated economic operation of the large generator units and improved management standards, as manifested primarily in smaller numbers of temporary repairs and a higher rate of commissioning of high-pressure heaters: the average number of temporary repairs dropped from 5.3 per unit in 1979 to 3.6 per unit in 1980, and the commissioning rate for high-pressure heaters increased from 68.1 percent in the first three-quarters of 1979 to 97.3 percent in the first three quarters of 1980, an increase of 29.2 percent, with the result that the coal consumption of the 125,000 kW power units dropped by 2.3 g/kWh.

D. Striving to Increase Generator and Boiler Efficiency

Steam turbine input steam characterisitcs, vacuum levels, feedwater temperatures and turbine and boiler efficiencies were increased to various degrees in the power plants. Under normal high load, the 125,000 kW units were changed over from floating steam pressure to the more economical fixed pressure operation. In the Huainan station's No 3 and 4 turbines, for example, the steam pressure was 133-137 kg/cm^3; the steam pressure in the Zhenhai station's 125,000 kW units is being held at 137 kg/cm^2, and the steam temperature at 540°C. After improvements were made on the Zhabei plant's No 16 high-pressure heater, the feedwater temperature rose from 220°C to 240°C. Efforts were made to bring the vacuum seals up to top standards in the Wangting power station's steam turbine shop, and the number of units at the top standards was increased from one-third at the beginning of the year to one-half. Excess nozzle and diaphragm flow area was sealed off on steam turbines Nos 3 and 8, new balance disks were installed, the copper cooling pipe on unit No 8 was replaced, and scale on the inner and outer surfaces of the copper tubing in the high temperature heaters was removed, after which the feedwater temperatures rose by 15 degrees and the efficiencies of the two turbines increased by 1.49 and 1.4 percent respectively. The Wuding power station arranged for divers to inspect the screening over the circulating pump water intake; the number of cleanings of the secondary filter was increased from two to four per shift; an access port for removing dirt from the secondary filter screen was provided; when the plastic ball cleaning system's ball recovery rate decreased, the plant carried out a cleaning and inspection of the tubes and plates; and during minor overhaul of the steam turbines, flushing of the copper condenser tubing was included among the standards, with the result that the average turbine condenser back pressure was 40.75 mm Hg for the year, down 0.77 mm from the 1979 figure, resulting in a saving of 1,026 tons of standard coal.

Combustion regulation of boilers has been strengthened, and particular attention has been paid to decreasing the carbon content of flyash from coal-burning boilers and to limiting low-oxygen combustion in oil-fired boilers. Soot blowers have been added, and accumulated soot on heating surfaces has been removed. The plugging of air leaks has been strengthened so as to decrease the flue temperature and increase boiler efficiency. In 1980, the power plants directly subordinate to this office installed 23 super-heaters and soot blowers with water-cooled walls, which in normal operation can increase the steam temperature and decrease the flue temperature by 10 to 15 degrees, increasing boiler efficiency by about 0.5 percent. Many power plants have organized combustion regulation groups, have strengthened coal classiffication, draft regulation, and chemical testing and analysis of coal and ash and the like, and the flyash carbon content and the oxygen content of the gas at the combustion chamber outlet have been decreased. For example, after a competition to decrease the carbon content of flyash at the Wangting medium-pressure power station was begun, the carbon content decreased from 5 percent to about 3.5 percent.

E. Cutting Back Energy Consumption by the Four Main Types of Auxiliary Machinery, and Making Wider Use of Energy-Saving and Modernization Measures

The various plants are continuing to make wider use of high-efficiency feedwater pumps, blowers and dust removers, and are removing one stage from pumps with excessive pressure head or machining down their impeller wheels; in addition, the blades of blowers with excessive pressure heads are being shortened. For example, an annual saving of 19.3 kWh was achieved on nine high-efficiency feedwater pumps in Anhui on which improvements were made; the saving on five pumps in Zhejiang which were improved was 1.27 million kWh a year, and that on three high-efficiency dust removers was 2.39 million kWh a year. The Huainan power station replaced the No 4 furnace's dust removers with model 5-36 high-efficiency blowers, saving 1.162 million kWh per year. The feedwater pump on boiler No 9 at the Minhang generating plant was replaced by a high efficiency unit, saving 5,000 kWh per day; the impellers on two feedwater pumps in boiler No 10 were made smaller, saving 17,000 kWh a day; and in addition a hydraulic ally-coupled speed-regulated feedwater pump produced by the Shanghai Electric Power Equipment Repair and Manufacture Combine was installed on the newly constructed boiler No 11, saving about 11,000 kWh of electricity a day. The top stage impeller wheel of the feedwater pump at Jianbi generating plant's unit No 6 was replaced by an inducer wheel, saving 4,800 kWh per day. The impeller of the Xuzhou power plant's No 4 circulating pump was made smaller, saving 3,000 kWh per day. The size of the impeller on the Sudong plant's No 3 circulating pump was also decreased, saving 1,800 kWh per day. One impeller was removed from each of two feedwater pumps at the Zhenhai plant, and from one pump each at the Huaibei and Ma'anshan plants, saving 15,000 12,000 and 1,400 kWh a day respectively. Impeller wheels were trimmed on eight blowers and suction fans at the Wujing, Huainan, Gaoqiao, Ma'anshan and Xuzhou power plants, saving a total of about 7,000 kWh a day.

Second, economic scheduling of auxiliary equipment and other measures were taken to save electricity. For example, the outlets from the two blowers on the No 3 boiler at the Jinshan power plant were cleared out, a throttle and an electrical interlock protection mechanism were installed at the blower inlet, and single blower operation saved 400 kWh a day. The circulating pumps on the Jiabei No 15 and 16 turbines had low suction, and it was necessary to use two jet pumps, but when these two pumps' suction tubes were cleared and the use of one jet pump was discontinued, 2,400 kWh per day was saved. During smooth shutdown of a 125,000 kW unit, after it had been cut back below 40 kg/cm^2 a medium-pressure feedwater pump was used in place of the high-pressure pump, making possible a saving of 12,000 kWh during each smooth shutdown, in addition to which it was possible to decrease friction wear on the feedwater valves, both of which circumstances were helpful in decreasing valve leakage and in uniformly lowering the gas temperature. The circulating pumps of units Nos 15 and 16 varied in electrical consumption, and after economic load scheduling was instituted, 1,000 kWh a day was saved. After the main water circulation line at the Tianshenggang power plant was cleared and the excess water from the circulating pump of the 125,000 kW unit used to supply the older plant, 1,500 kWh per day was saved; in addition, the pump impeller blade angle was adjusted to -6°, saving 1,500 kWh per day. The lead screening in the preheater for the No 8 boiler in the Minhang power plant was stretched, decreasing the air duct resistance and saving 10,000 kWh per day. The air duct cover and sealing devices of the preheater for the No 5 boiler at the Nanjing thermal electric power station were improved and the air leakage rate was decreased from 0.54 to 0.34; and a regulating grating was added to the intake of the ash remover, saving 240,000 kWh per year.

The power plants subordinate to this office decreased electrical consumption by more extensive use of new infrared technology. The Dakou, Zhenhai and Jianbi power plants also successfully test-installed a plant electric meter which was helpful in real-time monitoring.

F. Strengthening the Conservation Management System and Conservation Criticism and Comparison Activities

Encouraged by last year's first nationwide "Energy Conservation Month," all power plants and shops (or shifts) chose energy conservation leaders and responsible persons. Coal and electricity conservation groups, fuel management groups and the like were formed, and plant headquarters used monthly assignment sheets to transmit instructions and energy-saving measures down to the shop, team and individual levels, ran various competitions and figured bonuses monthly on a percentage basis. Some plants also conducted in-plant inspections and analysis. This office's subordinate units reinstated their previous mass-style activities based on identifying exemplary personnel. At the end of 1979, the various power plants subordinate to this office carried out energy utilization surveys and made a comparative analysis of actual and rated energy consumption, determined energy inputs and outlays, and developed measures for improvement, For example, Wujing power plant found that the main reason for high steam consumption was that in the past the flow area had been irrationally increased in order to increase output power, resulting in an increase in coal consumption of 7 g/kWh; piping was poorly insulated, increasing coal consumption by 1 g/kWh, the drain water removal rate was higher than the design figure, producing a coal consumption increase of 0.5g/kWh, and so on. As a result, 23 improvement steps were worked out. The Wangting generating plant's survey discovered that ten feed-water pumps in the plant had low efficiency. Seven of them have now been replaced, saving 3 million kilowatt-hours a year. They found that steam and water losses at the plant were rather high, so they successfully carried out a steam-water balance analysis and chemical monitoring, and over the course of 6 months the medium-pressure station's steam-water loss rate reached a record low of 1.4 percent. In addition to organizing a competition for 125,000 kW units, the system office also organized a competition between corresponding fuel-related operations at different directly subordinate power plants, and three plants were chosen as winners after exchange of experience and comparative evaluation. The three plants had rather outstanding results in improving the correctness of fuel calculations, in conducting acceptance testing of 100 percent of loaded and empty boats (or railcars), and in unloading directly at the plant's own wharves, thereby decreasing transport losses in transfer from one barge to another, eliminating the necessity of recovering the remaining coal, and conserving funds (800,000 yuan). The Zhejiang provincial power industry office held an energy conservation experience-exchange meeting at the Zhenhai generating plant and drew up quotas for the units directly subordinate to the provincial office. The Anhui provincial office held a technical and economic indicators conference at the Anqing generating plant for exchange of experience and discussion of evaluation methods. In August our office selected the Wujin plant and six others as the most advanced plants in energy conservation among the subordinate units, based on the State Economic Committee's "ten types of energy conservation work," "three major organizational measures" and "six main conditions for critical evaluation."

G. Conscientious Implementation of the "Line Loss Management System" and Active Promotion of the "Ten Experiences in Decreasing Line Losses"

Although the quantity of electrical energy supplied by the entire system in 1980 was up 7.1 percent over 1979, line losses were down from the previous year, saving 479 million kWh. This was owing primarily to intensified line-loss management.

At the end of 1979, a conference representing the entire power system subordinate to this office gave full financial, technical and management support to measures for decrease line losses. Starting on New Year's Day 1980, line losses throughout the system were divided into primary losses, secondary losses and supply line losses on the basis of voltage level; these were to be managed at the system office, provincial offices and local power supply offices respectively. The Nanjing, Shanghai and Hefei local power supply offices also instituted a number of instructions and made checks of the relevant departments, after which they mobilized employee energy conservation enthusiasm and implemented more than a thousand mass-style measures for decreasing line losses throughout the system, with an estimated saving of more than 100 million kWh. Second, the voltage level was raised. In 1980, the average voltage for the entire 220 kV main system at 9 o'clock was 220.9 kV, up 20.4 kV or 10.12 percent from 1979. The voltages were correspondingly raised at the 110 kV level and below, thereby decreasing line losses by about 150 million kWh. The third step was to intensify economic operation of the power grid. An effort was made to achieve local balancing of output and load in all the individual areas so as to minimize the amount of power exchanged in the power grid's tie lines. Compared with 1979, the quantity of power sent by Anhui to Jiangsu decreased by 40 percent, and the quantity which Zhejiang received from Jiangsu and Shanghai dropped by 42 percent, correspondingly decreasing line losses. The management of phase-adjustment operation of hydroelectric units was intensified: for example, in 1980 there were an average of 3 to 4 phase-adjustment units at Xin'an River station, 2 fewer than in 1979. The total annual electrical saving from these measures was 50 million kWh. The fourth measure was intensified construction of electrical transmission lines and substations and adjustment of the ratio between investments on generation and supply; investments [on power supply] in 1980 were 92.85 million yuan, accounting for 33 percent of the investment total and representing an increase over the 25 to 28 percent figure for the preceding few years, in addition to which replacement and modernization funds totaled 47 million yuan, also a higher figure than previous years. In 1980, six lines and six substations in the 220 kV circuit and large numbers of transmission lines and substations at the 110 kV level and below were completed, along with voltage upgrading, conversion and line replacement projects. It is estimated that these projects, together with those that went into operation in the second half of 1979, saved 100 million kWh. In addition, operations surveys were made, locating many instances of waste such as unmetered power use and theft and leakage of electricity and resulting in the recovery of paid power consumption amounting to 44 million kWh.

II. In 1980 it will be necessary to implement consistently the four-point policy centered on readjustment, to strengthen centralized management of the power grid, to strengthen the safety base, to pursue the "increased production and conservation" movement centered on energy conservation and to guarantee that the power grid will meet local agricultural and industrial production requirements and the people's daily-use power requirements. Below we list the ten main energy conservation measures for 1981.

A. Converting Medium and Low Voltage Units to Peak or Seasonal Generation So As To Increase the Percentage of Power Generated With High-Voltage Units

Before and after the high water season, the Minhang generating plant's 48,000 kW medium-pressure station, the Zhabei A 54,500 kW station, the Huainan power plant's 36,000 kW station and the Xiaguan power plant's 25,000 station are to be converted to peak-period or seasonal generation. In the case of oil-fueled boilers this is also helpful in decreasing oil consumption. Turbine and boiler equipment which is shut down must be overhauled and carefully maintained. It is estimated that the abovementioned measures can decrease the amount of electricity produced by medium and low pressure turbines by 680 million kWh, and that the changeover to generation by high-pressure generating units can save about 70,000 tons of standard coal.

B. Improvement of Oil-Fired Boilers, Energetic Efforts to Decrease Oil Consumption

(1) Conversion of the Wujing No 7 boiler to coal combustion was completed at the beginning of the year and the unit was phased into the system; this year oil consumption has been decreased by more than 100,000 tons. An effort is being made to complete the equipment for the ash removal system so that coal combustion will not be hindered by the ash removal problem.

(2) Energetic design work and preparations are under way for improvements on the Minhang No 9 boiler, which will be shut down in the second half of 1981; the conversion will decrease oil consumption by 50,000 tons.

(3) Design work and preparations are being made for improvements on the Wujing No 0 boiler, which will by shut down in the fourth quarter.

(4) Combustion regulation of the Minhang Nos 1, 2 and 11 boilers is being undertaken so as to minimize use of auxiliary fuel oil.

(5) After combustion becomes stable in the Yangchang No 35 furnace, the low pressure boiler will be entirely shut down, saving 60,000 tons of oil.

(6) The capacity of the Wusong substation is being increased and State Cotton Mill No 8 is being converted from 35 kV power supply. The Wusong power station's 36,000 kW generator is being converted to back pressure [5154 1090] operation, which will save 10,000 tons of oil, and further research is being done on steps to convert to the burning of coal.

(7) Work is being done at the Jianbi generating plant to alleviate blower wear, increase power output and decrease oil consumption. As early as possible, the Siaguan power plant's local load will be shifted to the new Sajiawan substation, and more small oil-burning boilers will be shut down.

C. Effective Preparation for Large-Unit Peak Laod Adjustment, Preparation for Full Hydroelectric Power Generation During the High-Water Season, and Prevention or DeCreasing of Water Waste

System peaks and valleys already differ by 1.5 to 1.8 million kilowatts, and in 1981 medium and low pressure units will be shut down. During full hydroelectric power generation in the high-water season, the large units will have to take on the task of peak load adjustment, and accordingly we must continue effective testing and modeling of the large units' load adjustment capability, for example turbine and boiler water circulation tests, tests of the speed at which fires can be increased, measurement of differences between the upper and lower wall temperatures of steam drums and the like.

We must fix the minimum power output for domestically produced 125,000 kW units and set permissible rates of change of load.

D. Intensified Reservoir Scheduling, and Expanded Incremental-Cost and Economic Laod Scheduling Between Hydroelectric and Fossil-Fired Plants

At the beginning of 1981, the water head at the Xin'an River hydroelectric station was 12.47 meters higher than during the same period last year. Now that the inflow is relatively large and the precipitation during the rainy season has been relatively concentrated, we must arrange to generate more electricity. In order to minimize or limit water losses and to prevent the water level in the reservoir from exceeding the normal storage level, this year we must gradually increase power output before the high-water season so as to decrease the reservoir water level, while during the rainy season we must determine the quantity of electricity to be generated on a month-to-month basis in terms of water inflow and gradually increase the level in the reservoir. During the period when the reservoir supplies water we must stringently control the amount of power generated so as to assure that at the end of the year there will still be a certain amount of water available for power production. At the Fengchun River hydroelectric plant, the amount of power generated will be decided in terms of water inflow; when there is a rather large inflow the Xin'an station will decrease its output so as to decrease the water inflow pressure on the Fengchun River station, and in addition the fossil-fired stations will suitably decrease their power output so that the Fengchun River station can operate at full output and minimize water losses. Other hydroelectric power stations will strive to use irrigation water to generate more electricity, and during the high-water season they will strive to support the flood control departments, adjust their output in rational fashion, and do everything possible to minimize water loss by generating electricity so as to decrease the water level.

The key to successful reservoir scheduling is a timely grasp of hydrological and meteorological changes and the provision of timely, correct reports on the water situation; accordingly, all hydroelectric plants and load scheduling bodies at all levels must make a major effort in these two kinds of work.

Determination of daily power output requires that the hydroelectric plants perform fully their function of peak and frequency regulation and their role as an emergency reserve. Accordingly, the Xin'an and Fuchun River plants must achieve good incremental-cost water consumption characteristics for the hydraulic turbine generators and for the plants as a whole so that they can use incremental-cost and economic scheduling of the individual units in the plant and develop incremental-cost and economic scheduling between hydroelectric and fossil-fired generation in the entire system. The Xin'an River and Fuchun River plants must also find ways to increase the degree of automation of hydrologic recording and use computers for economic reservoir adjustment.

As regards fossil-fired power generation, the provincial offices must convert some medium and low voltage units which will not require major engineering effort and will not affect local loads to peak or seasonal generation, or shut them down and carefully mothball them so that they will not be competing with the large units. The three provincial offices must also work out a comprehensive incremental-cost consumption curve for provincial dispatching stations and take part in system-wide economic scheduling. They must use their existing computers for incremental-cost and economic load scheduling in the provincial dispatching stations. The Wujing, Nanre, Jinshan and Yangshupu heat and power stations must determine all the thermodynamic characteristics of the heat supply units so as to pursue incremental-cost load scheduling for the plant's heat supply units.

In addition to publishing daily load curves, the general dispatching office should use computers to calculate and issue daily load rate and coal consumption rate information so as to improve the correctness of incremental-cost scheduling, and must investigate reactive power economic load scheduling for the Xin'an River and Fuchun River power plants and the Huaibei and Xuzhou long-distance plants.

E. Maintaining Cleanliness of Inner and Outer Heat Receiving Surfaces* of Boilers

Acid cleaning of boilers should be undertaken during major overhaul when it has been determined that there are excessive scale buildups in the tubing and on the walls, and spcialized acid cleaning services must be organized and intertrade boundaries overcome in order to promote industrial acid cleaning of boilers and save fuel. Boilers should be rationally provided with sufficiently effective soot removal blowers, and long and short tube-type soot blowers should be developed. The generating plants in Shanghai should learn from the experience of using existing soot removal equipment in the Nanshi power plant No 10 boiler, the Wangting No 13 boiler, the Yangchang No 31 boiler and the Minhang No 10 boiler (tight sealing of boiler drive mechanism) and make full use of the capabilities of ash* blowers already installed on boiler units. The various power plants should take advantage of overhauls to identify soot accumulation locations and should install a full set of soot blowers in the first half year, in addition to which they can follow Jianbi and Jinshan power plants' steel ball dust removal experience in boilers with tubular type preheaters.

In 1981 the power plants directly subordinate to the office will acid-clean 15 boilers, with an estimated improvement of 0.2 percent in boiler efficiency. The three provincial offices must also determine the number of boilers which require acid cleaning and draw up an acid cleaning plan. Waste acid must be suitably disposed of so that discharge standards are complied with. The experience of using ferrous sulfate to plate a coating on condenser tubes should be used more extensively, as should leak prevention experience. The Xuzhou and Huaibei power plants should promote sodium triphosphate treatment of circulating water and should install plastic dehydrators in cooling towers, eliminate condenser scale and decrease losses of cooling water.

F. Continued Improvement of Large Generating Units and Elimination of Bottlenecks

Increasing the utilization rate of 300,000 and 125,000 kW generator units and strictly limiting the power generation and operating hours of medium and low voltage units are important energy conservation measures. The Wangting and Jianbi 300,000 kW units' high pressure heaters will need to be installed at an early date. To make the generator units achieve their rate output, unit coal consumption should be decreased by 12 g/kWh, saving about 2,548 tons of coal a month. The Jianbi generating plant making an energetic effort to solve the problem of the three Jian-Chang loops before the high-water season so as to save 25,000 to 30,000 tons of coal. Because of the problem of circulating water escaping from the tubes in the newly constructed Minhang No 11 generator unit, the plant must make an energetic effort to install new drainage tubes so that the generating projects that have been put into operation will be able to produce their full economic benefit. In 1981 the three provinces will repair the final section heating surfaces of six 400 ton-per-hour boilers; by assuring quality and eliminating temporary repairs, they must strive to decrease the amount of work time and thereby increase the large units' utilization rate.

G. Continuous Expansion of the Use of High-Efficiency Fans and Water Pumps and Effective Fixing of the Design for the Auxiliary Equipment of Large Units

This office has a total of 289 blowers, suction fans and dust removers, of which 42 are axial-flow and 55 are centrifugal types. Most of the high-efficiency fans used in the past were of the centrifugal type, but because after the power grid recovered normal-frequency operation and the boilers returned to rated output, the nominal capacities of the fans and water pumps which had been converted were too large, so that it was necessary to make surveys and design new high-efficiency blowers and water pumps with reference to the actual form of operation.

An energetic effort whould be made in effective fixing the design of auxiliary equipment for 125,000 kW units: Wujing is the experimental unit for blowers and suction fans, while Minhang is the experimental location for dust removers; after the designs are finalized they will gradually be put into more extensive use. The Minhang generating plant is the experimental location for water pumps, and the efficiency of hydraulically-controlled feedwater pumps is gradually being improved. The use of circulating water vacuum pump deaerators is being studied.

H. An Effort to Automate Completely the Startup of Combustion in the Boilers of Large Units

The Minhang plant's No 10 boiler is being used as the experimental location for this effort, and after experience is summarized this approach will be put into use throughout the system; it may increase boiler efficiency by more than 0.2 percent. The Wangting plant's No 12 boiler is experimenting with use of a computer with its No 12 boiler to calculate efficiency and for automatic combustion regulation.

I. Continued Strengthening of the Technical Management of Energy Conservation

Energy conservation management requires persistent implementation of the "ten types of work" issued by the State Economic Committee and the document "Conditions for Coal and Electricity Conservation in the Power Grid and in Fossil-Fired Plants." We must start by strengthening the leadership and staffing of energy conservation work, and must transfer and fully replace personnel who are not suited to their positions. The assigned energy conservation indicators and measures must be analyzed and implemented down to the shop (or shift), team and individual levels. An effort must be made to see that measuring and testing procedures are in place within 2 years, that coal scales and oil meters are installed and calibrated, that correct measurements, calculations and evaluations of plantwide and individual station coal and oil consumption are made; the current practice of calculating coal consumption by the reverse balance method and of closing coal consumption accounts in terms of the number of trays remaining at the end of the month must be changed (the reverse balance calculation method may be used only for technical analysis).

J. Do Everything Possible to Decrease Line Losses

Construction of the power network at all levels must continue to be intensified, reactive power must be compensated, work on transmission, distribution and consumption must be increased, and voltages must be raised to the normal levels. Economic reactive power operation throughout the system must be pursued, and the Xin'an River hydroelectric station and the 110 kV Shangyu power station should be used as test points to investigate optimal control of reactive power and voltage at power plants and substations. Low-loss distribution substations should be used, and the replacement of low-silicon steel switchgear should be accelerated. Theoretical line loss calculations and operational surveys should be conducted and continued improvement should be made in the management of electric metering.

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CSO: 4006/375

SHIJINGSHAN POWER CORPORATION ENERGY CONSERVATION MEASURES DESCRIBED

Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 6, 5 Jun 81 pp 8-10

[Article by Shijingshan Power Combine: "Strengthen Enterprise Management, Strive to Conserve Energy"]

[Text] We are an electric power enterprise which runs three power plants and five power stations with 21 generating units of various types and with a total generating capacity of 1.06 million kW. In recent years, as a result of intensified enterprise rectification and management, we have pursued a coal and electricity conservation movement while maintaining safe power production. In 1979 we drew up a list of 38 power conservation measures and saved more than 97,000 tons of coal for the state. In 1980 we made further efforts to use latent conservation potential in the equipment and further decreased various consumption indicators. Our specific coal consumption for the year was 393 g/kWh, 3 g/kWh lower than the plan figure, which gave a saving of more than 20,000 tons of coal. The 100,000 kW unit at the Gaojing plant and the 200,000 kW unit at the Jingxi generating plant maintained their specific coal consumption at advanced national levels for the type of equipment in question.

1. Strengthening Operations Management

In order to assure safe and economical operation of the equipment and to save energy, we adopted the following measures.

A. Effective Management of Boiler Unit Operation in Order to Maintain Long-Term High-Efficiency Boiler Operation

The boiler operating personnel at the Gaojing plant conscientiously implemented the coal and electricity conservation regulations, maintained conscientious inspection, ash sampling and adjustment during operation, and strove to maintain a stable steam temperature, a stable water level, and stable load adjustment. The chemists carried out continual tests of the coal powder fineness and furnished data for combustion regulation. At any time when boiler combustion conditions were incorrect, heat testing personnel made timely on-the-spot draft measurements, and they and the operating personnel jointly regulated combustion. As a result of intensified combustion unit operation management and close coordination between the relevant shops and specialists, the boiler efficiency in 1979 was 93.38 percent, exceeding the average design parameters for each boiler (91.86 percent), and saving more than 25,000 tons of standard coal.

B. Intensified Analysis of Operations in Order to Make Equipment Operation More Economical

The heat economics groups of the combine and its individual plants constantly analyzed equipment operating conditions and problems which arose during operation, located the problems, proposed measures and jointly solved the problems. For example, the makeup water rate in the Gaojing plant's boilers was somewhat higher than in the same period in the preceding year; the personnel of the heating economics group made a thorough analysis of the reasons, along with the operating personnel, and solved all of the problems which were found, bringing the makeup water rate down somewhat. In 1978, there were 348 boiler and turbine stoppages and restarts, 142 more than in 1977, and the makeup water rate was down 2.44 percent from the 1977 figure of 2.56 percent. In 1979 the Gaojing power plant undertook the task of peak regulation; there were 670 boiler and turbine stoppages and restarts, 2.3 times as many as in 1977, and the makeup water rate stayed at 2.50 percent. In 1980 there were 1,035 turbine and boiler stoppages and restarts, 4 times as many as in 1977, and the makeup water rate was 2.61 percent, which still met the Ministry of Electric Power's coal and electricity conservation standards (2 or 3 percent).

C. Holding of Competitions, and Conservation of Boiler Ignition Oil

Since the Gaojing plant organized the operating personnel for a competition to save boiler ignition oil in May 1979, the personnel have constantly summarized their operating experience and had had outstanding results in conserving ignition oil. In 1978 there were 149 furnace startups, consuming 776 tons of oil, an average of 5.14 tons per startup (including oil used to assist combustion), while in 1979 and 1980 the startup figures were 298 and 496 times respectively and the average ignition oil consumption dropped to 1.07 and 0.528 tons per startup respectively. Currently the hot-furnace ignition oil consumption for a 220 tph [ton per hour] boiler is 0.1 tons per startup, and the cold-furnace ignition consumption is 1.0 tons per start-up, while for a 410 tph boiler the ignition oil consumption (cold furnace) is 2 tons per ignition.

D. Intensified Boiler Combustion Regulation Testing to Assure Optimal Oxygen Content of Flue Gas

The Jingxi power plant made solving the problem of black smoke emissions during fluctuation of boiler loads and during the shutdown and startup process one of its major coal and electricity conservation topics, and specialized personnel and operators made joint combustion regulation tests which showed that the optimum flue gas oxygen content was 2 percent, in addition to which they worked out an effective operating method: during increasing loads they adjusted the draft first and then the oil, and when the load was decreasing they adjusted the oil first and then the draft. In this way good combustion conditions were maintained in the furnace, and there were virtually no black smoke emissions from the smokestack.

E. Intensified Combustion Management and Effective Oil Monitoring Work

The 670 tph boiler at the Jingxi plant burns heavy oil, and in the past no one had any idea whether there were deficits in oil received. Starting in 1978 a combustion oil monitoring system was established and kept in continued operation. In the first half of 1977 the oil supply deficit rate was 3.16 percent; timely establishment of relations with the oil supply units and frequent representations to them resulted in confirmation of the situation. In 1980 there was virtually no deficit, and the plant's coal consumption (calculated equivalent of oil consumption) was down 7.6 g/kWh from the 1979 figure.

2. Intensified Equipment Management

In recent years, we have persisted in carrying out comprehensive survey-type thermal efficiency tests before each major unit overhaul, and have made elimination of energy-wasting equipment defects during operation a key aspect of coal and electricity conservation work.

At the time of each major overhaul, the turbine inspection and maintenance teams persist in meeting the overhaul quality standards and deal conscientiously with even the most minor aspects, such as scraping clean the connecting surfaces of the steam cylinder and diaphragm to make sure that the gaps meet the standards, adjusting the gaps in the axle seals and diaphragm steam seals to within acceptable tolerances, using a sand blaster and gauze to thoroughly clean scale from the diaphragm and the blades, and so on. As a result, overhaul of a 100,000 kW unit resulted in an increase of 0.45 to 0.79 percent in boiler efficiency, so that each unit's coal consumption fell by 4.2-7.4 kg/kWh.

During each overhaul, the boiler overhaul teams must thoroughly clean the heating surfaces, completely ream out the air preheated tubes, assure that there is no air leakage in the plenum or walls, recondition burned-away combustion nozzles and the like. In 1980, following an overhaul of the Gaojing plant's No 6 boiler, efficiency was increased by 0.82 percent. Because of scale accumulations on the water cooler walls, acid cleaning was carried out on the water side of the cooler walls of six boilers, making a contribution to safe and reliable boiler operation.

Because the inspection and maintenance personnel have combined economy with safety in putting quality first, have accorded proper importance to the quality of their procedures, and have devoted attention to day-to-day maintenance, modernization and improvement, they have continuously improved the equipment conditions and have greatly decreased the number of temporary turbine and boiler stoppages for overhaul. For exmaple, in 1977 the six 100,000 kW units at the Gaojing station were stopped 37 times for temporary repairs, while in 1980 the figure dropped to 16 times; in 1977 turbine and boiler downtime was 1,664 hours, while in 1980 the figure had dropped to 219 hours.

Intensified equipment management and improved equipment overhaul and maintenance quality have lengthened the time between overhauls, decreased the number of temporary repairs and shortened the time required for major and minor overhauls and temporary repairs, creating the conditions for production of more electric power.

3. Organizing Mordernization, Exploitation of Latent Potential, and Improvement

In order to assure safe, full-capacity, reliable operation of the units, all of the plants and stations have organized three-way technical task groups which include workers, technical personnel and cadres, have mobilized the masses, and have carried out modernization, conversion and full-utilization activities, achieving rather good results in energy conservation.

A. Keeping Plastic Ball Cleaning Apparatus Operating Normally

For many years the Gaojing power plant's steam turbine condenser tubes have had a serious scale problem, and the traditional labor-consuming method of having the workmen ream out the copper tubes, carrying out acid cleaning, and installing circulating water flue gas treatment equipment have been tried, but these steps were incapable of achieving a substantial solution of the scale accumulation problem in the condenser tubes. All of the plant's 600,000 kW generation equipment proved capable of supporting only about a 500,000 kW load during the summer when the water temperature was high, and accordingly starting in 1976 the plant decided to install two filter screens and a plastic ball cleaning system. After repeated improvements over the course of a year and a half, by June 1977 continuous plantic ball cleaning of condenser tubes had been tested on six 100,000 kW generator units, and more than 3 years of essentially normal operation have given a ball recovery rate of over 95 percent. During a windstorm in the winter of 1977, large number of leaves and grass passed through the protective grating into the second filter so that it became clogged and the ball cleaning equipment was temporarily disabled. In the summer of 1980 there was a serious moss problem, and the ball cleaning system suffered another serious breakdown. Because leadership at all levels concerned themselves with the problem and quickly organized a repair group, normal operation of the ball cleaning system was assured. In 1980 boiler shutdowns were utilized to carry out 22 ball removal operations on 12 condensers on 6 turbines, removing a total of 6,510 balls which were stuck in the copper tubes, and assuring normal operation of the ball cleaning system which can make possible a saving of 18 tons of standard coal a year.

B. Decreasing the Length of Repair Stoppages of High-Pressure Heaters

When high-pressure heaters leak and are withdrawn from operation, unit coal consumption goes up by 7 to 10 g/kWh. In order to assure that the quantity of feedwater passing through the heaters was constant and did not exceed the design figures, the Gaojing power plant added a connecting line to the main lines exiting from the feedwater pumps between units so that the point at which the main feedwater lines were paralleled was moved from the heater output to the its inlet. In order to decrease heater leakage and increase the utilization rates, the steam turbine overhaul crew continuously summarized experience, improved the quality of their overhaul procedures and decreased the stoppage time required for overhaul. In 1976 each high-pressure heater overhaul at the Gaojing power plant required an average stoppage of 115.8 hours; in 1979 the figure was 40.5 hours and in 1980 23.4 hours. The number of internal leaks in the heaters also showed a clear decline. In 1976 the utilization rate was 88 percent, in 1979 96 percent, and in 1980 97.8 percent. The 1979 utilization rate for the Jingxi power plant's 200,000 kW unit high-pressure heater was 73.1 percent, which was raised to 96.7 percent in 1980. Both plants achieved the advanced operating characteristics (95 to 98 percent) requested by the Ministry of Electric Power).

C. Addition of Advance Preheaters to Prevent Ash Clogging of the Air Preheaters

Because the input air temperature at the Jingxi power plant's air preheater was low and there were serious condensation and ash accumulation problems, it was manually reamed out from top to bottom during major overhauls. The working conditions were poor and the work extremely toilsome, and even when the procedure was modernized and water under a pressure of 13 kg/cm^2 was used to wash the unit out from top to bottom, it was still necessary to ream out each of 3,000 blocked preheater tubes during each major overhaul, which involved a large quantity of work. As a result, starting in 1978 advance preheaters were installed on six turbines, and the condensation corrosion and ash accumulation problems in the preheater low temperature stage were essentially solved, so that excellent heat transfer efficiency was constantly maintained.

D. Experimental Use of Flue Gas Recycling Equipment to Increase Reheat Temperatures

The 670 tph vertical cyclone furnace at the Jingxi plant was originally provided with a flue gas recycling temperature adjustment device, but it could not be used; in order to increase the economy and safety of the unit's operation, in cooperation with brother units the plant put it onto trial operation in December 1980 during overhaul and conversion work, which solved the problems of decreased heat absorption by the convective heating surfaces and excessively low first and second stage steam temperatures and economizer outlet temperatures resulting from a drop in the flue gas temperature at the outlet of the rear fuel oil combustion chamber (originally designed to burn Jingxi smokeless coal); as a result the average reheater temperature increased by 25°C (with installation of a recycling blower), and it was possible to decrease coal consumption by 1.49 g/kWh, saving 1,640 tons of coal a year.

E. Some Other Energy Conservation Measures

In recent years the Gaojing power plant has carried out improvements on 15 dust removers, three blowers and two feedwater pumps, making possible annual savings of 4.2 million, 600,000 and 3.00 million kWh respectively. A hydraulic jet was used to replace an ash slurry pump in the chemical water settling system, making possible a saving of 30,000 to 40,000 kWh of electricity each year. Use of pressurized water from the outlet of a circulating pump to replace a wash pump made possible an annual saving of 10,000 kWh. In order to decrease coal consumption, an expander was added to the turbine final stage steam outlets; a bled steam source was replaced by a low-pressure steam source; and a header was added to the outlet of the condensate pumps. In order to assure that the generator would achieve the desired output and to increase hydrogen pressure operation, they adopted measures such as decreasing hydrogen leakage.

The Jingxi power plant's 200,000 kW units constantly operate under low load, and in order to improve their operating economy under these conditions, single-speed suction fans were replaced by two-speed fans, resulting in a clear electrical energy saving. The plant also improved the water removal method in the large oil tanks, saving about 35,000 kWh of electricity a year.

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CSO: 4006/375

GENERAL

METHOD OF TECHNICALLY EVALUATING ECONOMIC PROJECTS DESCRIBED

Tianjin KEXUEXUE [SCIENOLOGY] in Chinese No 3, 1981 pp 23-24

[Article by Wang Guoxing [3769 0948 5281] of Jiangxi Provincial Scientific and Technological Commission: "Probing Into the Analysis of Technical Economy Carried Out in Development Study"]

[Text] Science and technology must be closely integrated with economic construction in order that the projects under study can be technically advanced and economically rational. Therefore, a study of the rationality, speedy action and correctness of our policy decisions on science and technology is urgently needed, particularly in conducting demonstrations and analyses of certain important technical and economic problems in our country.

This article will introduce the concept of value engineering as a method of comprehensive qualitative and quantitative analysis in development study. Its main feature is the combination of simple mathematical calculations with tangible demonstrations and analyses. This method can be used for technical and economic forecasts before the beginning of the study and can serve as reference data for policy decisions with a view to obtaining better results in scientific research. It can also be used for a more objective technical and economic evaluation of the result of the research.

Value engineering is generally conducted according to the following procedure:

1. Work out various alternate plans and ascertain their technical and economic indexes;

2. Prove and analyze the tangible factors that may influence the various plans and select the corresponding technical and economic parameters;

3. Work out the corresponding formulas for mathematical calculations together with numerical values to be substituted;

4. Carry out a comprehensive analysis and demonstration of the internal and external advantages and disadvantages from various technical and economic aspects, compare the plans and finally choose the best one;

5. Conduct research, design, trial production or experiment, and constantly followup and examine the projects under research.

The mathematical form of value engineering in research is expressed as:

$$V = E.Ka.Kv.Kl.Kd.Ke \ldots\ldots\ldots\ldots\ldots\ldots(1)$$

Here V stands for value engineering; E, for economic benefits; Ka, for progressiveness coefficient; Kv, for feasibility coefficient; Kl, for dependability coefficient; Kd, for suitability coefficient; and Ke, for job opportunity coefficient.

Value engineering can be used for technical or economic forecasts on the projects under research, or to compare them with one another. It can also provide reference data for policy decisions in tapping potentials and renovating or transforming production enterprises; or for technical or economic evaluations of the result of research.

Economic benefits refer to the amount of economic gain and can be expressed as follows:

$$E = 1 - W \ldots\ldots\ldots\ldots\ldots\ldots(2)$$

Here 1 is the anticipated gain; W, the research expenditure.

It is obvious that the greater the economic benefits, the more acceptable will be the research project.

The anticipated gain in (2) means income from the expected increase in sales or the expected savings in production (to be accounted for annually or to be accumulated year after year). This numerical value can be calculated from the anticipated performance of the project under research. The research expenditure can be calculated as follows:

$$W = K(Wr + Wm) \ldots\ldots\ldots\ldots\ldots\ldots(3)$$

Here W stands for research expenditure; Wr, for labor consumption (or living labor) including the wages of the research personnel, expenses for inspection travel, design expenses, and so forth; Wm, for material consumption (or materialized labor) including materials, elements, parts, extra installations and equipment, trial production, processing expenses, and so forth; K is the coefficient of scientific research and management expenses. Generally, it is expressed as $K = 1.1 - 1.3$, in consideration of scientific research and management expenses which combine to form the whole research expenditure.

Progressiveness refers to the degree of superiority of the technical function of the project under research. There are still divergent views and disputes on this question. According to the viewpoint of the "high-grade, precision and advanced school," people can blindly strive for "advanced world levels" in disregard of objective conditions and production costs. According to the viewpoint of the "suitable technology school," people may one-sidedly stress suitable value and confuse scientific research with ordinary "tapping potentials, renovation and transformation." These people may also insist on a reasonable technical standard, but this standard must be based on what is within our power. If the progressiveness coefficient expressed by Ka is divided into "low, medium and high" grades, then it should be correspondingly expressed as Ka = 0.8; 1.0. and 1.2. This will enable us to consider the degree of superiority in selective value engineering.

Feasibility. This refers to the possibility of success or failure for the project under research. It is commonly called the degree of certainty. A feasibility analysis means a calculation of the risks involved. Feasibility varies according to different characteristics in different projects. In conducting research, feasibility is greater when similar samples or experiences at home or abroad are available for reference, and the risk likely to be encountered is less. The analysis of feasibility is mainly based on the availability of scientific and technological data, the skill of research personnel, the extent of certainty in tests and experiments, facilities for processing and trial production, the performance of elements, spare parts and auxiliary equipment and their availability, and many other factors. Accordingly, Kv is used to denote the feasibility coefficient. Thus Kv = K_1, K_2, K_3, K_4 and K_5. The numerical values can be obtained from Table 1.

Table 1.

Name of coefficient	Symbol	Numerical Value
Availability of data	K_1	0.8-1.1
Skill of research personnel	K_2	0.8-1.1
Certainty of tests and experiments	K_3	0.9-1.1
Processing and trial production	K_4	0.9-1.1
Supply of elements, parts and equipment	K_5	0.9-1.1

Table 2.

Name of coefficient	Symbol	Numerical Value
Breakdown frequency	K_1	0.9-1.2
Sustained breakdown	K_2	0.9-1.2
Average life	K_3	0.9-1.1
Durability	K_4	0.9-1.1
Effectiveness	K_5	0.9-1.1

Table 3.

Name of coefficient	Symbol	Numerical Value
Promotion	K_1	0.9-1.1
Popularization	K_2	0.8-1.2
Marketing	K_3	0.8-1.2

Dependability. This refers to the probability of expected performance and freedom from breakdown under normal conditions within a certain time. The elements of dependability include: Breakdown frequency (number of breakdowns per unit time), duration of sustained breakdown, average life, durability, effectiveness and other factors. Quantitative analysis is as difficult for dependability as it is for progressiveness. However, this element is of great significance to the value of the project. If a research or innovation project is technically advanced with great economic benefits but undependable in the course of production, it cannot be easily popularized or may even be written off as a total failure. In studying the dependability of a research project, the dependability coefficient may be expressed by Kl. Thus Kl = K_1, K_2, K_3, K_4, K_5, and their numerical values can be obtained from Table 2.

Suitability. This concerns whether the result of research can promote the technology of production and be popularized or whether it is suitable for marketing. Promotion means the ability to lead or speed up the development of production or the progress of technology in other departments and the possibility of its causing a chain reaction. Popularization means the widespread use of the project in the production within a short time even by other trades and professions. Marketing refers to the degree of competitiveness in the market. All these factors come under the category of suitability, and its coefficient can be expressed by Kd. Thus Kd = K_1, K_2, K_3 and their numerical values can be obtained from Table 3.

Job opportunity. This means a comparison of the labor power required for the research project with that required by similar equipment or measures so as to determine whether labor will be reduced or increased. This consideration is necessary in view of our present large population and the difficulty of job placement. If, in such circumstances, we one-sidedly strive for high automation and high labor productivity to the extent of jeopardizing job opportunities, a social problem will arise. Of course, this element should be combined with economic benefits, progressiveness, feasibility, dependability and suitability for a comprehensive analysis. For practical purposes, the job opportunity coefficient can be expressed as Ke, and the "abundance, equivalent and scarcity" are expressed as Ke = 0.9; 1.0; 1.1.

In applied value engineering, two points should be clarified:

1. In conducting analysis of technical and economic forecasts,

(1) Job opportunity coefficient Ke should be in direct proportion to value engineering V when we consider the job opportunity angle. Thus,

$$V = Ka.Kv.Kl.Kd.Ke$$

(2) Job opportunity coefficient Ke should be in inverse proportion to value engineering V when we consider raising labor productivity. Thus,

$$V = E.\frac{Ka.Kv.Kl.Kd}{Ke}$$

(3) Both (1) and (2) have to be considered when there is no way to check the economic benefits. Thus,

$$V = \frac{Ka.Kv.Kl.Kd}{Ke}$$

or V = Ka, Kv, Kl, Kd, Ke.

V > 1 means acceptable and V < means unacceptable.

In evaluating or comparing the results of research, we should first compare them with projects of the same character before those of different characters.

In carrying out value engineering, we should throughout the entire process of practical application conduct follow-ups, exercise supervision and take detailed notes to insure the success of the research. Upon the completion of the research, we again have to check the result against the forecast and evaluation so as to prove its superiority or defects, and draw lessons from our experience for future guidance.

Since quantitative analysis is much more difficult than qualitative analysis in development study, particularly in the selection of numerical values for certain coefficients, we can therefore only advance through probing in practice in order that our work can be gradually improved or rationalized. However, technical and economic analyses of research projects are indispensable, and the broad masses of scientific workers are expected to carry out further probing. It is hoped that this article will provoke some effective action. (Examples omitted)

(Edited and published by Yin Jun [3009 6874])

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CSO: 4006/437

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DATE FILMED

14 Sept 1981